
APPENDIX.

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APPENDIX.

No. 479 of 1868.

Separate.

Military Department.

To the Right Honourable the Secretary of State for India.

SIR,

WE have the honour to forward Minutes by the Right Honourable the Governor General and the Honourable Colonel Norman on the subject of pensions to widows and orphans of officers entering the staff corps from the British Army, as well as of chaplains and medical officers under the new conditions of service.

2. We consider the necessity to secure a provision for the widows and orphans of the above officers to be most urgent, and we very earnestly recommend the proposals contained in the Minute of Colonel Norman to the favourable consideration of Her Majesty's Government.

We have, &c.,
(Signed) JOHN LAWRENCE.
W. R. MANSFIELD.
HENRY S. MAINE.
J. STRACHEY.
R. TEMPLE.
H. W. NORMAN.

Fort William,
The 14th December 1868.

Exd. M. Joseph.

MINUTE by the Honourable Colonel H. W. NORMAN, C.B., on the subject of Pensions to Widows and Orphans of Officers entering the Staff Corps from the British Army, as well as of Chaplains and Medical Officers under the new conditions of service.

ONE of the measures resolved on in connexion with the abolition of a local army for India was the transfer of the several Military and Orphan Funds in the three presidencies to the Government, and their gradual winding up.

By these funds, which were maintained by donations and subscriptions from the officers of the army, aided by not very large subscriptions from Government, pensions were provided for widows and for orphans, and some other advantages given, such as passage money on certain occasions, an income allowance of £50 a year to subalterns on furlough, and an outfit allowance to a sick officer going home.

The advantages, and the rates of subscription, and the rules, differed in all the presidencies, but in all a fair provision was secured for widows and orphans, mainly from the proceeds of the subscription of the officers themselves.

When the Government took over the funds, all advantages were guaranteed to the existing subscribers, who continued, subject to the previous rules as to rates of subscription and donation; but as no new subscribers were to be admitted, the funds would gradually expire.

The Staff Corps is now recruited from the British army, and it has been laid down that in the case of all officers so appointed, their widows and families will be granted a pension "not less than that to which they would be entitled under the provisions of the Royal Warrant of June 15th, 1855."

In communicating this decision, the Secretary of State remarked that it remained "to be decided from what funds those pensions will be provided."

It seems pretty clear, however, that this new pension list will be a charge on the State, while the pensions to widows and orphans formerly given, though far more adequate than the new scale, cost the State only a comparatively small sum in the shape of an annual subscription to each fund.

Annexed are the statements showing the amount of donations and subscriptions paid by officers, under the old system, to the funds of the three presidencies, and of the pensions given to widows and orphans.

There is also attached a copy of the pension scale of the British army, which now will be applicable to the families of officers entering the Staff Corps.

These pensions are manifestly inadequate to the support of the widows and children of gentlemen, and in the case of the Royal army, to avoid the scandal of widows having to be privately aided, to enable them to return home, a Queen's Widows' Fund has been in existence for many years, formed from subscriptions of officers, from which fund grants of money are given to widows to enable them to defray all their expenses till they leave India, and to pay their passage home.

It seems most desirable that some fund should be re-constituted by which the widows and legitimate orphans of officers now entering the Staff Corps should be secured from poverty, as is now the case with the families of officers who belonged to the late Indian army, and of the Civil Service; and in any scheme of the kind medical officers and chaplains might be appropriately included, as they were under the former system, subscribing and receiving advantages, according to their relative rank, with combatant officers.

But, as an improvement on the old system, I think the fund should be entirely a Government institution, with a uniform scale of donations, subscriptions, and pensions for the three presidencies. No advantages beyond pensions to widows and orphans are now needed, as the present system of Furlough Regulations should render it unnecessary for officers to require the aid previously given by funds when they proceeded home.

Looking to the rates of pensions formerly given, and striking somewhere about the average of the three presidencies, I think the following would be a fair scale of pension for widows and orphans :—

	£
Widow of a colonel - - - -	240 a year.
” ” lieutenant-colonel - - - -	200 ”
” ” major - - - -	160 ”
” ” captain - - - -	120 ”
” ” lieutenant - - - -	70 ”
Orphan (male or female) under 5 years of age -	24 ”
Male orphan from 5 to 19 or any earlier age at which provided for - - - -	40 ”
Female orphan from 5 until married - - - -	40 ”

Under the old system a small marriage dower for girls, or apprentice fee for boys, was authorized, but this I think need not form a part of the new system.

I think if some such scale of pensions could be secured to the families of officers of the Staff Corps the respectability of the service would be increased, and the advantage of belonging to it more highly prized.

As I do not think Government need be put to more expense than a payment equivalent to the scale of pensions given in the British army to widows and orphans, I would suggest that the donations and subscriptions should be limited to such amount as might fairly meet the cost of the increase of pensions.

For those officers now in the Staff Corps who came from British regiments I would allow subscription or not to be optional, but I think it should be compulsory on all hereafter joining, as it used to be in the Indian army, and is now in the Civil Service.

As no officer who is not married could benefit by the fund I would require no donation from a bachelor joining the Staff Corps, or from a bachelor on promotion from one rank to another, and his subscription I think should not exceed half that of a married officer without children. From the married officer on joining the Staff Corps, or from a Staff Corps officer marrying, or a married officer on promotion, a donation might be exacted; and besides double the subscription of the bachelor in each grade, I think a monthly subscription for each child eligible to the benefits of pension might be exacted, as is now the case with subscribers to the late Bengal Orphan Fund.

What should be the scale of pensions and donations is a matter for an actuary, and probably could only be soundly reported on at home, and anything I could devise on the subject would probably be incorrect; but I think there would be no difficulty in doing this on the principles above proposed.

I would solicit the support of the Viceroy and of his Excellency's Council to the scheme I propose, or to some modification of it. The case of a chaplain's widow has already excited public attention, and necessitated a subscription on her behalf, and in a few years such cases will become numerous, and constant appeals come for charitable aid for widows and orphans left in a strange land with means utterly inadequate to support them. It was greatly to remedy this state of things that the old funds were established; and as I do not ask for an expenditure of public money, but merely for an organized system under government control, by which officers shall subscribe the equivalent between the government rate of pensions and those on a higher, but still moderate scale, I should hope that Her Majesty's Government would view the proposal with favour.

Calcutta,
The 4th December 1868.

H. W. NORMAN.

I.

STATEMENT of Donations paid by Subscribers to the Military Funds of the Three Presidencies.

	BENGAL.					MADRAS.					BOMBAY.																																								
	Married.		Unmarried.			Married.		Unmarried.			Married.		Widows with Offspring.		Unmarried.																																				
	On joining.	On promotion.	On joining.	On promotion.	On marriage.	On joining.	On promotion.	On joining.	On promotion.	On marriage.	On joining.	On promotion.	On joining.	On promotion.	On joining.	On promotion.	On marriage.																																		
Colonels -	Rs. 4,350	As. 0	P. 0	Rs. 723	As. 12	P. 0	Rs. 787	As. 8	P. 0	Rs. 157	As. 8	P. 0	Rs. 3,912	As. 8	P. 0	Rs. 3,700	As. 0	P. 0	Rs. 1,100	As. 0	P. 0	Rs. 2,000	As. 0	P. 0	Rs. 550	As. 0	P. 0	Rs. *4,000	As. 0	P. 0	Rs. 6,000	As. 0	P. 0	Rs. 2,400	As. 0	P. 0	Rs. 2,250	As. 0	P. 0	Rs. 900	As. 0	P. 0	Rs. 1,500	As. 0	P. 0	Rs. 600	As. 0	P. 0	Rs. 4,500	As. 0	P. 0
Lieut.-Cols. -	2,501	0	0	642	8	0	630	0	0	157	8	0	2,151	4	0	2,600	0	0	800	0	0	1,450	0	0	400	0	0	2,900	0	0	3,600	0	0	800	0	0	1,350	0	0	300	0	0	900	0	0	200	0	0	2,700	0	0
Majors -	1,452	0	0	517	8	0	472	8	0	135	0	0	1,190	0	0	1,800	0	0	600	0	0	1,050	0	0	300	0	0	2,100	0	0	2,800	0	0	1,000	0	0	1,050	0	0	380	0	0	700	0	0	250	0	0	2,100	0	0
Captains -	695	0	0	455	0	0	337	8	0	135	0	0	507	9	0	1,200	0	0	500	0	0	750	0	0	250	0	0	1,500	0	0	1,800	0	0	600	0	0	670	0	0	320	0	0	450	0	0	130	0	0	1,350	0	0
Lieutenants -	450	0	0	150	0	0	202	8	0	67	8	0	225	0	0	700	0	0	400	0	0	500	0	0	200	0	0	1,000	0	0	1,200	0	0	400	0	0	450	0	0	150	0	0	300	0	0	100	0	0	900	0	0
Ensigns -	300	0	0	—			135	8	0	—			150	0	0	800	0	0	—			800	0	0	—			600	0	0	800	0	0	—			300	0	0	—			200	0	0	—			600	0	0

* Marriage donations when the husband's age exceeds that of his wife by more than 8 years will be regulated by a disparity scale which became a rule in 1844.

II.

STATEMENT of Monthly Subscriptions to the Military Fund at the Three Presidencies for Widows.

	BENGAL.				MADRAS.				BOMBAY.																											
	Married.		Unmarried.		Married.		Unmarried.		Married.		Unmarried.																									
	In India.	In Europe.	In India.	In Europe.	In India.	In Europe.	In India.	In Europe.	In India.	In Europe.	In India.	In Europe.																								
Colonels -	Rs. 62	As. 8	P. 0	£ 3	s. 15	d. 0	Rs. 28	As. 2	P. 0	£ 1	s. 13	d. 9	Rs. 63	As. 13	P. 3	£ 1	s. 17	d. 6	Rs. 42	As. 8	P. 10	£ 1	s. 5	d. 0	Rs. 64	As. 8	P. 0	£ 1	s. 17	d. 6	Rs. 43	As. 0	P. 0	£ 1	s. 5	d. 0
Lieut.-Colonels -	45	0	0	2	10	0	20	4	0	1	2	6	40	12	9	1	10	0	27	3	2	1	0	0	34	8	0	1	10	0	23	0	0	1	0	0
Majors -	35	0	0	2	0	0	15	12	0	0	18	0	31	9	3	1	4	0	21	0	10	0	16	0	27	12	0	1	4	0	18	8	0	0	16	0
Captains -	20	0	0	1	6	3	9	0	0	0	11	10	18	6	11	0	15	9	12	4	7	0	10	6	17	0	0	0	15	9	11	4	0	0	10	6
Lieutenants -	12	8	0	0	16	3	5	10	0	0	7	4	11	2	0	0	9	9	7	6	8	0	6	6	9	12	0	0	9	9	6	8	0	0	6	6
Ensigns -	10	0	0	0	13	2	4	8	0	0	5	11	8	14	11	0	7	11	5	15	3	0	5	3	7	8	0	0	7	10½	5	0	0	0	5	3

III

STATEMENT of Monthly Subscriptions to the Bengal Military Orphan Fund.

	Rs.	As.	P.	In addition.	Monthly. Rs. As. P.
Colonel	25	0	0	For each male child until he attains the	1 0 0
Lieutenant-Colonel	20	0	0	age of 19 years	
Major	15	0	0		
Captain	10	0	0	For each female child until marriage or	3 0 0
Lieutenant	6	4	0	death	
Ensign	5	0	0		

MADRAS.—There is no separate subscription in Madras, but one rupee is payable for each child, whether son or daughter until 21 years, with a donation of rupees 282 for each daughter, if a claim to pension after 21 years of age be desired, to be secured.

BOMBAY.—No monthly subscription nor any payment for children, but a donation of rupees 200 for daughters, 100 for sons.

IV.

STATEMENT of the Annuities to widows of deceased Subscribers of the Military Fund of the three Presidencies.

	BENGAL.		MADRAS.		BOMBAY.	
	In India.	In England.	In India.	In England.	In India.	In England.
Colonel's widow	Rs. As. P. 2,574 12 0	£ s. d. 281 12 3	Rs. As. P. 2,064 7 3	£ s. d. 235 18 9	Rs. As. P. 1,822 3 6	£ s. d. 203 0 0
Lieutenant-Colonel's "	2,059 13 0	225 5 9	1,826 9 0	208 15 0	1,555 8 10	175 0 0
Major's "	1,546 13 0	168 19 3	1,588 10 9	181 11 3	1,288 14 2	145 0 0
Captain's "	1,029 15 0	112 12 11	1,197 10 6	136 17 6	1,066 10 8	120 0 0
Lieutenant's "	768 15 0	84 1 11	894 2 3	102 3 9	908 5 4	102 3 9
Ensign's "	611 5 0	66 17 3	715 5 0	81 15 0	726 10 8	81 15 0

V.

STATEMENT of Annuities to children of Subscribers of the Military Orphan Fund of the Bengal Presidency.

	MALE.				FEMALE.				
	Under 5 years of Age.	From 5 to 19 years of age, or in a position to gain his own livelihood before them.	Under 6 years of age.	From 6 to 19 years of age.	Under 5 years of age.	From 5 till marriage or death.	Under 6 years of age.	From 6 to 18 years of age.	After 18 years of age.
In India	Rs. As. P. 20 0 0	Rs. As. P. 35 0 0	£ s. d. —	£ s. d. —	Rs. As. P. 20 0 0	Rs. As. P. 35 0 0	£ s. d. —	£ s. d. —	£ s. d. —
In England	—	—	30 0 0	40 0 0	—	—	30 0 0	45 0 0	35 0 0

MALE.—Apprentice fee or final grant in India rupees 500, if sanctioned by the general management.

FEMALE.—Marriage portion 150*l.* if in England, and rupees 1,500 if in India, if sanctioned by the general management.

VI.

STATEMENT of Annuities to children of deceased Subscribers of the Military Funds of the Madras and Bombay Presidencies.

	MADRAS.				BOMBAY.			
	Bereft of Father only.		Bereft of both Parents.		Bereft of Father only.		Bereft of both Parents.	
	In India.	In England.	In India.	In England.	In India.	In England.	In India.	In England.
Under { (Madras) 6 years of age } (Bombay) 7 "	Rs. As. P. 175 0 0	£ s. d. 20 0 0	Rs. As. P. 262 8 0	£ s. d. 30 0 0	Rs. As. P. 200 0 0	£ s. d. 22 10 0	Rs. As. P. 266 10 8	£ s. d. 30 0 0
From { (Madras) 6 to 12 years of age } (Bombay) 7 to 10 "	262 8 0	30 0 0	393 12 0	45 0 0	266 10 8	30 0 0	400 0 0	45 0 0
From { (Madras) 12 to 21 " } (Bombay) 10 to 18 "	350 0 0	40 0 0	525 0 0	60 0 0	333 5 4	37 10 0	533 5 4	60 0 0

SCALE referred to in the preceding Regulation.

RANK OF THE OFFICERS.	Widows ordinary pension.	Special pension in lieu of ordinary pension.		Allowance to the mother or sister of an officer killed in action.	Compassionate allowance to legitimate children.			Aggregate amount of allowances to the family of any one officer not to exceed.	
		To widows of officers dying from illness contracted in the field.	To widows of officers killed in action.		If the officer was killed in action.	If the officer died from illness contracted in the field.	If the officer was not killed in action, or did not die from illness contracted in the field.	If killed in action.	If not killed in action.
General Officer	£ 120	According to circumstances.		£ 120	£ 25 to 40	£ 20 to 30	£ 16 to 20	£ 500	£ 300
REGIMENTAL OFFICERS.									
Colonels not being also General Officers	100	£ 150	£ 200	100	18 to 25	16 to 20	14 to 16	} 350	} Not exceeding the annual amount of the half-pay attached to the rank of the officer.
Lieutenant-Colonels } of the Foot Guards	90	145	200	90	18 to 25	16 to 20	14 to 16		
Majors	80	140	200	80	18 to 25	16 to 20	14 to 16		
Lieutenant-Colonels	70	100	130	70	16 to 20	14 to 17	13 to 14	250	
Majors	} 50	65	80	50	12 to 16	10 to 14	9 to 12	150	
Captains									
Paymasters	} 40	50	60	40	8 to 14	6 to 12	5 to 10	100	
Lieutenants									
Adjutants	} 36	40	46	36	8 to 14	6 to 12	5 to 10	80	
Second Lieutenants									
Cornets	} 36	40	46	36	8 to 14	6 to 12	5 to 10	80	
Ensigns									
Quarter Masters { under 10 years' service	36	40	46	36	8 to 14	6 to 12	5 to 10	80	
{ after 10 " "	40	50	60	40	8 to 14	6 to 12	5 to 10	100	
{ after 20 " "	50	65	80	50	12 to 16	10 to 14	9 to 12	150	
Veterinary Surgeons { under 10 years' service	40	50	60	40	8 to 14	6 to 12	5 to 10	80	
{ after 10 " "	45	55	70	45	8 to 14	6 to 12	5 to 10	100	
{ after 20 " "	55	70	80	55	12 to 16	10 to 14	9 to 12	150	
MEDICAL OFFICERS.*									
Inspectors General of Hospitals	100	150	200	100	18 to 25	16 to 20	14 to 16	350	
Deputy	80	140	200	80	18 to 25	16 to 20	14 to 16	350	
Staff Surgeons, 1st class	} 70	100	130	70	16 to 20	14 to 17	12 to 14	250	
Surgeon Majors of the Regiments of Foot Guards									
Ditto, 2nd class, and Regimental Surgeon	50	65	80	50	12 to 16	10 to 14	9 to 12	150	
Purveyors, under 10 years	36	40	46	36	8 to 14	6 to 12	5 to 10	80	
Ditto after 10 "	40	50	60	40	8 to 14	6 to 12	5 to 10	100	
Ditto after 15 "	50	65	80	50	12 to 16	10 to 14	9 to 12	150	
Assistant Surgeons	40	50	60	40	8 to 14	6 to 12	5 to 10	100	
Chaplains to the Forces	} 50	65	80	50	12 to 16	10 to 14	9 to 12	150	
District Paymasters									
Provost Marshals, commissioned as such									
Other Staff or Garrison Officers	According to the Regimental Commissions which they held when placed on half-pay.								

* The widows of half-pay Medical Officers holding any commission giving a rank not included in the above scale may, if eligible, have the rates of pension specified in the scale annexed to the warrant of 13th June 1826.

MINUTE by His Excellency the Right Honourable the Governor General

I AM most strongly in favour of this proposal, and would urge it very strongly on the Secretary of State for India. It appears to me to be the duty of the Government to establish such funds, and insist on officers subscribing to them on entering the local service. Unless officers are compelled to subscribe for the future maintenance of their widows and children, this sacred duty will in many cases be neglected, and we shall constantly have instances of these relatives of officers, who have held honourable positions under the Government of India, seeking, and seeking even in vain, for assistance from the public. Such a state of things would, I submit, be derogatory to the service at large, and a grave scandal in the eyes of the natives of the country. On public grounds, therefore, as well as to prevent much misery and degradation hereafter to many helpless ladies and children, tenderly brought up, I strongly recommend the proposal for the support of my colleagues and the Secretary of State.

The 5th December 1868.

JOHN LAWRENCE.

I quite agree.

The 6th December 1868.

J. STRACHEY.

And I.

The 7th December 1868.

H. S. MAINE.

And I.

The 7th December 1868.

G. N. TAYLOR.

MINUTE by the Honourable Sir R. TEMPLE, K.C.S.I.

I UNDERSTAND that a limited amount of widows' pension, according to the analogy of the British Service, is to be paid by the State; and that the remainder required to make up the amount to the old Indian scale is to be obtained by enforced subscriptions from the officers themselves. In the general principle, I cordially concur, as being essential to the efficiency and character of the future Staff Corps.

The 5th December 1868.

R. TEMPLE.

Exd. M. Joseph.

Sir,

India Office, S.W.,
25th February 1869.

I AM directed by the Secretary of State for India in Council to forward for your information, copy of a despatch from the Government of India, relating to a proposal to establish a system of Pensions for the benefit of Widows and Children of Officers of the several Staff Corps, and I am to request that, as soon as the work upon which you are now engaged shall have been completed, you will prepare and submit a full report upon the probable financial operation of Colonel Norman's proposal.

I have, &c.

T. T. PEARS,

Major-General, Military Secretary.

Major-General Hannington.

Sir,

London, 5th April 1869.

BEFORE entering on the money calculations respecting a system of Pensions for the benefit of Widows and Orphans of Officers in the Staff Corps, it is necessary to define the rates of interest and exchange that may be used without disadvantage to the Government or its officers.

I would respectfully suggest four and a half per cent. interest per annum, and one shilling and elevenpence for the rupee, as equitable rates, and I will adopt these if not otherwise instructed.

I have, &c.

J. HANNINGTON.

To Major-General Pears, C.B.,
Military Secretary.

Sir,

India Office, S.W.,
23d April 1869.

I AM directed by the Secretary of State for India in Council to acknowledge the receipt of your letter of the 5th instant, and to acquaint you in reply that you are authorised to adopt the rates therein proposed for interest and exchange in your calculations on the subject of the scheme for Pensions to Widows and Orphans of Officers entering the Staff Corps from the British Army, and of Chaplains and Medical Officers under the new conditions of service.

I have, &c.,

T. T. PEARS,

Major-General, Military Secretary.

Major-General Hannington.

Symbols and Formulæ.

Person.	Age.	Number living at that Age.
Officer	x	l_x
Wife	y	l_y
Widow	w	l_w
Son	s	l_s
Daughter, unmarried	u	l_u

1. $l_x - l_{x+1} = d_x$; the number of officers now aged x , who die in the next, or $(x + 1)^{\text{th}}$ year.
2. $\frac{l_y + l_{y+1}}{2} = l_{y+\frac{1}{2}}$; the number of wives now aged y , who live till the middle of the next, or $(y + 1)^{\text{th}}$ year.
3. r = the rate of interest per cent. per annum.
(In the calculations, $r = .045$.)
4. $v^x = \frac{1}{(1+r)^x}$; the present value of a monetary unit to be received at the end of x years hence.
5. $l_x v^x = D_x$
6. $\sum (D_{x+1}) = N_x$; the sum of $D_{x+1} + D_{x+2}$, &c. to the end of life.
7. $\frac{N_x}{D_x} = a_x$; the present value of a monetary unit, to be received at the end of each year of age during the existence of a life now aged x . This is called a life annuity.
8. $l_x l_y v^y = D_{x,y}$. Note. In the joint life formulæ, v^y is used for convenience in the arithmetical operations.
9. $\sum (D_{x,y+1}) = N_{x,y}$; the sum of $D_{x,y+1} + D_{x,y+2} + \&c.$, to the end of coexistent life.
10. $\frac{N_{x,y}}{D_{x,y}} = a_{x,y}$; the present value of a monetary unit to be received at the end of each year during the coexistence of the lives now aged x and y . This is called a joint life annuity. It ceases on the failure of either life.
11. $d_x l_{y+\frac{1}{2}} v^{y+\frac{1}{2}} a_{w+\frac{1}{2}} = D_{x,y}^{\frac{2}{2}}$. Note. $l_{y+\frac{1}{2}} v^{y+\frac{1}{2}} a_{w+\frac{1}{2}} = B_y$
12. $\sum (D_{x,y}^{\frac{2}{2}}) = N_{x,y}^{\frac{2}{2}}$; the sum of $D_{x,y}^{\frac{2}{2}} + D_{x,y+1}^{\frac{2}{2}} + \&c.$, to the end of life.
13. $\frac{N_{x,y}^{\frac{2}{2}}}{D_{x,y}^{\frac{2}{2}}} = a_{x,y}^{\frac{2}{2}}$; the present value of a monetary unit, to be received in the middle of each year, after the decease of a male, now aged x , and to continue during the *widowhood* of his wife now aged y . Payment ceases on re-marriage or death.
14. $ma_{x,y}^{\frac{2}{2}}$ = the present value of a reversionary widowhood annuity of m units of money.
15. $S(a_{x,y} + .458)$ = the present value of an annuity of S units of money payable in 12 equal portions during the year.
16. Equating the expressions 14 and 15, we have—

$$m = \frac{S(a_{x,y} + .458)}{a_{x,y}^{\frac{2}{2}}}, \text{ and } S = \frac{ma_{x,y}^{\frac{2}{2}}}{a_{x,y} + .458}$$

17. If a donation or fine f be paid in reduction of S , then—

$$S = \frac{ma_{x:y}^2 - f}{a_{x:y} + .458}$$

18. When m and S are fixed, the fine f for disparity of age is,—

$$ma_{x:y}^2 - S(a_{x:y} + .458) = f.$$

19. $a_u - a_{x'u}$ = the present value of an annuity, payable so long as a daughter now aged u , may live *unmarried* after the decease of her father now aged x .

20. $S = \frac{m(a_u - a_{x'u})}{a_{x'u}}$; the amount of yearly subscription to be paid during the co-existence of the lives now aged x and u to provide a reversionary annuity m , payable to u while *unmarried* after the death of x .

21. $S = \frac{m(a_u - a_{x'u}) - f}{a_{x'u}}$ = the same, supposing a fine f , to be paid at the beginning.

22. In the case of sons, let it be understood that the annuities are temporary, D_{21} being the limit of D_s , and $D_{55:21}$ the limit of $D_{x:s}$; then, putting s for u , the formulæ 20 and 21 will serve to determine the subscriptions to be paid for sons.

23. The addition to be made to a joint life annuity for monthly payments is in all cases 0.458.

24. The present value at age x of an annuity to begin at a future age $x + n$ is $\frac{D_{x+n}}{D_x} a_{x+n} = {}^n a_x$, and the form holds when $x \cdot y$ or $\frac{2}{x \cdot y}$ is put for x .

25. The present value at age x , of an annuity which will be reduced to one half at the age $x + n$, is $a_x - \frac{{}^n a_x}{2}$.

26. The present value of an annuity to begin at age x and continue till age $x + n$ is $\frac{N_x - N_{x+n}}{D_x} = {}^n | a_x$. This holds when $x \cdot y$ or $\frac{2}{x \cdot y}$ is put for x .

27. The present value of a monetary unit to be received on the death of a person now aged x is, $v - (1 - v) a_x = A_x$.

Note on the Construction of the Tables.

1. Nearly all of the calculations in this report have been effected on the "arithmometre" or calculating machine invented by M. Thomas de Colmar. As this machine is not yet known and appreciated as it deserves to be, and as it is necessary to explain some of the processes that I have used, the following details will not be deemed out of place.

2. Let it be understood that the machine will add or subtract numbers up to 1,000 millions; that it will multiply eight figures by eight figures, giving products up to sixteen figures; that it will divide sixteen figures by eight figures, giving the quotient to any extent; and all this without risk of error.

3. I had first occasion to compute a table of v^x from v^0 to v^{100} at $4\frac{1}{2}$ per cent. To effect this I had to compute by hand v^{10} , v^{20} , v^{30} , &c., each tenth value, to a large number of decimal places.

4. The machine gives $v = \frac{1}{1.045} = 0.9569377990430622$, and by tabulating the first nine multiples of this, it becomes easy to form v^2 . Again tabulating we can form v^4 ; from v^4 we get v^8 , and then $v^8 \times v^2$ gives v^{10} . In precisely the same way we can obtain successively v^{20} , v^{30} , v^{40} , and so on. The values are in fact as follows:—

$$v^2 = 0.91572995124$$

$$v^4 = 0.83856134359$$

$$v^8 = 0.70318512697$$

$$v^{10} = 0.64392768203$$

$$v^{20} = 0.41464285968$$

$$v^{30} = 0.26700001551$$

$$v^{40} = 0.17192870109$$

$$v^{50} = 0.11070964997$$

$$v^{60} = 0.07128900828$$

$$v^{70} = 0.04590496586$$

$$v^{80} = 0.02955947826$$

$$v^{90} = 0.01903416316$$

$$v^{100} = 0.01225662660$$

5. The required table may now be completed in reverse order on the machine, by the formula—

$$v^{n-1} = v^n (1 \times r)$$

an extremely simple process.

6. This done, the next step is to form $D_x = l_x v^x$, to which end v^x is put on the machine, and is multiplied by l_x . The details pass off on the machine, and the values of D_x have only to be transcribed as they arise. The summation on the machine gives N_x , and then $\frac{N_x}{D_x}$ gives a_x , the present value of an annuity on the life x .

7. It is here to be remarked that the last step is one of division, an operation that even on the machine is not nearly so facile as multiplication. I have therefore found it convenient to record D_x^{-1} from the table published by Lieut.-Col. W. H. Oakes, a work of great value, and to which, as will be seen, I am much indebted. Thus we have $N_x D_x^{-1} = a_x$, the product of two factors.

8. By a similar method any of the single life annuity tables may be formed.

9. The joint life tables might be formed in the same way, but although the machine does not err, the computer might in a multitude of *detached* operations commit errors that would elude notice. To prevent this it is always proper to devise continuous processes in which a single error induces a series of errors that cannot escape detection. For, at fixed points, independent values may be interposed, and when the continuous values agree with these, the work must be right, or a disagreement will disclose error to be then corrected.

10. It would be tedious further to explain the various arithmetical details. Suffice it to say that the values of $D_{x,y}$ and $D_{x,y}^{-2}$ for each 10th difference of age from -10 to $+40$ were independently computed on the machine to many places of figures. The intermediate values were constructed by continuous operations, and are certainly free from any material errors. However, to afford a means of verifying them by ordinary methods the logarithms of l_x , D_y , d_x and B_y are given.

11. I may observe that the symbol $D_{x,y}$ is the product of three factors, and that commonly $l_x v^x = D_x$ and $l_y D_x = D_{x,y}$. I have, however, used the form $l_y v^y = D_y$ and $l_x D_y = D_{x,y}$. The reason of this departure from the usual practice is that the symbol $D_{x,y}^{-2}$ is the product of four factors, $d_x l_{y+\frac{1}{2}} v^{y+\frac{1}{2}} a_{w+\frac{1}{2}}$, of which three, namely $l_{y+\frac{1}{2}} v^{y+\frac{1}{2}} a_{w+\frac{1}{2}} = B_y$ can be formed once for all (since $w = y$), thus affording the form $d_x B_y = D_{x,y}^{-2}$, in which only B_y is partly fractional, d_x being an integer. By this arrangement the formula is better suited to the machine. Then in the form $\frac{N_{x,y}^{-2}}{D_{x,y}} = a_{w,y}^{-2}$, because v^y is symmetrically involved, the final result is correct. Here also $D_{x,y}^{-1}$ taken from Colonel Oakes's table of reciprocals has been of much use.

12. In the tables of $D_{x,y}$ and $D_{x,y}^{-2}$ the decimal point is noted, the quantities being, however, divided by 100, but in the summation $N_{x,y}$ and $N_{x,y}^{-2}$ the decimal point has been omitted, five figures being given without regard to their local value. In like manner the reciprocals are given as integers. This will not cause any real difficulty, and it saves much room. Suppose that in the table of equal ages it were desired to verify the annuity value for $x = 40$, then $15392 \times 61436 = 94562$, or supplying the decimal point 9.4562 . No other value could well be supposed. A glance at the *progression* of the quantities would resolve any doubt that might arise in other cases.

13. On the table for converting annuities into reversions I may remark that such tables were first published by the late Mr. Orchard. To compute them by help of the machine is very easy.

14. From the formula, No. 27., it appears that when $a_x = 0$, then $A_x = v$; and when $a_x = 1$ then $A_x = v - (1 - v)$. Hence by continually subtracting $(1 - v) \times .001$ from v , the required table may be formed to any extent, each turn of the machine giving a new value. A record of these would occupy many pages, and abbreviation is therefore desirable.

15. When $a_x = r$, then $A_x = 1 - r$. In the present case $r = .045$ and $1 - r = .955$. Thus we have a point at which there are no decimals beyond the third place. Again, when $a_x = .254$ then $A_x = .946$ exactly. We may now perceive that the fourth and following decimals are recurrent, and disappear at regular intervals. These intervals correspond with a difference of $.254 - .045 = .209$ in a_x , and of $.955 - .946 = .009$ in A_x , and we may notice that $.209$ is derived from $2(1 + r)$, and $.009$ from $2r$. Consequently the first part of the table may be formed by the continual addition of $.209$ in column a , and subtraction of $.009$ in column A_x . The second part of the table contains the 208 successive multiples of $1 - v$ to a sufficient number of places.

16. I have explained the construction of this table at some length because the process may be useful in other cases.

17. The arrangement of the table is a good example of *packing*. Here in one page are 315 values, from which, in pairs only, we can readily form 22470 values.

18. The table for finding the addition to be made to an annuity when made payable half-yearly, and to the date of death, is constructed on similar principles, with differences of detail that need not here be shown.

19. The tables for exchanging pounds and rupees at 1s. 11d. the rupee, are peculiar in form, and they contain much in small compass.

DATA AND ELEMENTARY TABLES.

LIFE TABLES. INDIAN MILITARY.

Age.	Officers.		Wives.		Till Death or Marriage.				Age.	Sons.		Age.		
	l _x .	Σ (l _x).	l _y .	Σ (l _y).	Widows.		Daughters.			l _r .	Σ (l _r).			
					l _w .	Σ (l _w).	l _d .	Σ (l _d).						
0									100000	2222142	0	100000	1569466	0
1									66529	2122142	1	83640	1494446	1
2									81171	2035613	2	78263	1344456	2
3									78299	1954442	3	75445	1266693	3
4									76406	1876143	4	73645	1211108	4
5									75055	1799737	5	72371	1157423	5
6									74059	1724683	6	71348	1095052	6
7									73277	1650623	7	70616	1019664	7
8									72612	1577346	8	69979	943046	8
9									72054	1504734	9	69434	873079	9
10									71577	1432680	10	68988	803645	10
11									71158	1361103	11	68598	734459	11
12									70777	1290046	12	68251	666061	12
13	100000	3584021	2293	95597	68894	1593599	70415	1219168	69692	1078695	13	67926	597810	13
14	99833	3484921	2271	91304	69459	1524705	70058	1148758	69088	1009003	14	67606	529944	14
15	99411	3385098	2240	89033	67344	1456242	69692	1078695	68088	940615	15	67278	462278	15
16	98737	3285677	2227	86784	65590	1388909	69088	1009003	67187	876728	16	66930	395000	16
17	97815	3186940	2205	84657	62807	1323342	68187	940615	66340	812769	17	66553	327070	17
18	96670	3089125	2183	82353	59199	1260535	66959	876728	65540	750000	18	66140	261517	18
19	95326	2992455	2161	80169	56680	1201336	65325	812769	64789	688444	19	65747	195377	19
20	93809	2897129	2139	78008	54642	1146656	63789	750000	64054	628220	20	65340	129900	20
21	92140	2803320	2117	75889	52905	1096010	62339	688444	63340	569000	21	64926	64650	21
22	90353	2711180	2095	73752	51385	1048940	60989	628220	62640	510000	22			
23	88477	2620827	2073	71657	50000	1005064	60000	569000	61989	451000	23			
24	86544	2532350	2051	69584	48752	963977	59089	500000	61340	392000	24			
25	84584	2445806	2029	67533	47611	925355	58240	441000	60690	333000	25			
26	82626	2361222	2007	65504	46504	888444	57497	382000	60040	274000	26			
27	80695	2278596	1985	63497	45427	854174	56740	323000	59390	215000	27			
28	78788	2197901	1963	61512	44377	821143	56054	264000	58740	156000	28			
29	76903	2119113	1940	59549	43343	789596	55426	205000	58090	97000	29			
30	75039	2042210	1916	57609	42326	759413	54840	146000	57440	41000	30			
31	73193	1967171	1891	55693	41326	730547	54290	87000	56890		31			
32	71365	1893978	1865	53802	40343	702931	53760	29000	56340		32			
33	69559	1822615	1838	51937	39374	676468	53240	23000	55790		33			
34	67780	1753054	1811	50099	38433	651114	52730	17000	55240		34			
35	66031	1685274	1783	48288	37507	626761	52230	11000	54690		35			
36	64317	1619243	1755	46505	36600	603314	51740	5000	54140		36			
37	62640	1554926	1726	44750	35711	580966	51260		53590		37			
38	61001	1492296	1697	43024	34843	558707	50790		53040		38			
39	59399	1431285	1667	41327	34000	537572	50330		52490		39			
40	57834	1371866	1637	39660	33177	516946	49880		51940		40			
41	56306	1314052	1606	38023	32374	496848	49440		51390		41			
42	54815	1257746	1574	36417	31591	477223	48990		50840		42			
43	53359	1202931	1542	34843	30826	458032	48550		50290		43			
44	51936	1149572	1509	33301	30080	439240	48110		49740		44			
45	50545	1097636	1476	31792	29351	420846	47670		49190		45			
46	49184	1047091	1442	30316	28637	402814	47230		48640		46			
47	47852	997970	1408	28874	27937	385144	46790		48090		47			
48	46556	950055	1374	27466	27250	367839	46350		47540		48			
49	45305	903409	1340	26092	26576	350908	45910		46990		49			
50	44099	858196	1305	24752	25911	334365	45470		46440		50			
51	42940	814407	1270	23447	25257	318247	45030		45890		51			
52	41857	771148	1234	22177	24611	302575	44590		45340		52			
53	40809	729291	1198	20943	23974	287356	44150		44790		53			
54	39791	688832	1162	19745	23343	272584	43710		44240		54			
55	38792	648691	1126	18583	22717	258223	43270		43690		55			
56	37800	608959	1090	17457	22097	244314	42830		43140		56			
57	36806	572099	1054	16367	21482	230817	42390		42590		57			
58	35799	535293	1018	15313	20871	217725	41950		42040		58			
59	34769	499494	982	14295	20262	205012	41510		41490		59			
60	33708	464725	946	13313	19653	192641	41070		40940		60			
61	32608	431017	910	12367	19043	180598	40630		40390		61			
62	31464	398409	874	11457	18433	168973	40190		39840		62			
63	30277	366945	838	10583	17823	157862	39750		39290		63			
64	29046	336698	802	9745	17213	147270	39310		38740		64			
65	27730	307629	766	8943	16603	137202	38870		38190		65			
66	26427	279840	730	8177	16003	127752	38430		37640		66			
67	25143	253363	694	7447	15413	118915	37990		37090		67			
68	23778	228220	658	6753	14833	110686	37550		36540		68			
69	22385	204442	622	6095	14263	103059	37110		35990		69			
70	20968	182057	585	5473	13703	96032	36670		35440		70			
71	19533	161089	548	4888	13153	89505	36230		34890		71			
72	18088	141556	511	4340	12613	83478	35790		34340		72			
73	16638	123488	474	3829	12083	77851	35350		33790		73			
74	15191	106830	437	3355	11563	72624	34910		33240		74			
75	13756	91639	401	2918	11053	67797	34470		32690		75			
76	12346	77863	365	2517	10553	63370	34030		32140		76			
77	10970	65538	330	2152	10063	59343	33590		31590		77			
78	9646	54608	296	1822	9583	55716	33150		31040		78			
79	8386	44922	263	1526	9123	52489	32710		30490		79			
80	7203	36536	231	1263	8683	49662	32270		29940		80			
81	6167	29333	201	1032	8253	47135	31830		29390		81			
82	5106	23226	172	831	7843	44808	31390		28840		82			
83	4206	18120	145	659	7453	42681	30950		28290		83			
84	3410	13914	120	514	7083	40664	30510		27740		84			
85	2718	10504	97	394	6733	38847	30070		27190		85			
86	2127	7786	77	297	6393	37230	29630		26640		86			
87	1632	5659	60	220	6063	35713	29190		26090		87			
88	1228	4027	46	160	5743	34296	28750		25540		88			
89	905	2799	35	114	5433	32979	28310		24990		89			
90	653	1894	26	79	5133	31762	27870		24440		90			
91	460	1241	19	53	4843	30745	27430		23890		91			
92	317	731	14	34	4563	29828	26990		23340		92			
93	209	464	10	20	4293	28911	26550		22790		93			
94	129	255	6	10	4033	28094	26110		22240		94			
95	72	126	3	4	3783	27277	25670		21690		95			
96	35	64	1	1	3543	26460	25230		21140		96			
97	14	19	-	-	3303	25643	24790		20590		97			
98	4	5	-	-	3063	24826	24350		20040		98			
99	1	1	-	-	2823	24009	23910		19490		99			
100	-	-	-	-	14	14	6</							

The following hitherto unpublished Abstract of Data obtained from the officers of the Bengal Army in the year 1850 was prepared by the late Mr. Peter Hardy, F.R.S., Actuary to the London Assurance Corporation. It is worth preserving as an authentic contribution to the Statistics of Infant Life in India. The returns furnished by the officers included *all* their children, living and dead, with the dates of birth and death.

The number of lives of each sex which passed through each age from birth, and the number of deaths which happened at each age, embraced in the register transmitted with Major Hannington's letter, dated 29th July 1852.

Age.	Males.		Females.		Total.		Double of Total.	
	Living.	Dying.	Living.	Dying.	Living.	Dying.	Living	Dying.
0	1440	122	1420.5	110	2860.5	232	5721	464
1	1224	144	1213.5	129	2437.5	273	4875	546
2	991.5	58	990	62	1981.5	120	3963	240
3	867	21	844	30	1711	51	3422	102
4	779	9	740	7	1519	16	3038	32
5	709.5	6	668.5	7	1378	13	2756	26
6	650.5	2	601	3	1251.5	5	2503	10
7	591.5	5	543.5	4	1135	9	2270	18
8	531.5	2	492	2	1023.5	4	2047	8
9	478.	3	446	2	924	5	1848	10
10	431.5	2	399	1	830.5	3	1661	6
11	388	2	357	3	745	5	1490	10
12	345	3	318.5	1	663.5	4	1327	8
13	306	2	282	4	588	6	1176	12
14	269.5	1	244.5	1	514	2	1028	4
15	233.5	2	213	1	446.5	3	893	6
16	198.5	1	180.5	1	379	2	758	4
17	174	6	148.5	2	322.5	8	645	16
18	149.5	0	121.5	0	271	0	542	0
19	129	2	.97	0	226	2	452	4
20	109	1	74	0	183	1	366	2
21	92.5	0	56	0	148.5	0	297	0
22	81.5	0	44	0	125.5	0	251	0
23	71.5	0	37.5	1	109	1	218	2
24	59.5	0	26.5	0	86	0	172	0
25	49.5	2	20.	0	69.5	2	139	4
26	40.5	0	15.5	0	56	0	112	0
27	35.5	1	11.5	0	47	1	94	2
28	28	0	9	0	37	0	74	0
29	21.5	0	6.5	0	28	0	56	0
30	18.5	0	5	0	23.5	0	47	0
31	16	0	4.5	0	20.5	0	41	0
32	12.5	1	3.5	0	16	1	32	2
	11523	398	10634	371	22157	769	44314	1538

Unadjusted Life Table, deduced from the record of children born in India.

	Numbers that			Log e	Log s	Log p _x	Log l _x	l _x	d _x
	Enter.	Die.	Survive.						
0	5721	464	5257	3.7574719	3.7207380	1.9632661	5.0000000	100000	8110
1	4875	546	4329	6879746	6363876	9484130	4.9632661	91890	10292
2	3963	240	3723	5980241	5708930	9728689	9116791	81598	4942
3	3422	102	3320	5342800	5211381	9868581	8845480	76656	2285
4	3038	32	3006	4825878	4779890	9954012	8714061	74371	783
5	2756	26	2730	4402792	4361626	9958834	8668073	73588	694
6	2503	10	2493	3984608	3967223	9982615	8626907	72894	291
7	2270	18	2252	3560259	3525684	9965425	8609522	72603	576
8	2047	8	2039	3111178	3094172	9982994	8574947	72027	282
9	1848	10	1838	2667020	2643455	9976435	8557941	71745	388
10	1661	6	1655	2203696	2187980	9984284	8534376	71357	258
11	1490	10	1480	1731863	1702617	9970754	8518660	71099	477
12	1327	8	1319	1228709	1202448	9973739	8489414	70622	426
13	1176	12	1164	0704073	0659530	9955457	8463153	70196	716
14	1028	4	1024	3.0119931	0103000	9983069	8418610	69480	270
15	893	6	887	2.9508515	9479236	9970721	8401679	69210	465
16	758	4	754	8796692	8773713	9977021	8372400	68745	363
17	645	16	629	8095597	7986506	9890909	8349421	68382	1696
18							8240330	66686	

Note.—The large number of deaths in the second year of age seems to indicate that some births have not been recorded. But from the completion of the first year of age, the table represents facts.

INTEREST, FOUR AND A HALF PER CENT.

Present Value of £1 to be received any Number of Years hence.

Numbers.			Logarithms.		Numbers.			Logarithms.	
x	v^x	v^{x+1}	Log. v^x	Log. v^{x+1}	x	v^x	v^{x+1}	Log. v^x	Log. v^{x+1}
0	1.0000000	0.97799511	0.0000000	T.9903367	50	0.11070965	0.10827350	T.0441855	T.0345222
1	0.95693780	*93588049	T.9808837	9712204	1	*10594225	*10361100	0250692	T.0154059
2	*91572995	*89557941	-9617674	9521041	2	*10138014	*09914928	T.0059529	T.9962896
3	*87629660	*85701979	9426511	9329878	3	*09701449	*09487969	T.9868366	9771733
4	*83856184	*82010890	9235348	9138715	4	*09283683	*09079396	9677203	9580570
5	*80245105	*78479320	9044185	8947552	5	*08883907	*08688418	9486040	9389407
6	*76789574	*75099828	8853023	8756389	6	*08501347	*08314276	9294877	9198244
7	*73482846	*71865864	8661860	8565226	7	*08135260	*07956245	9103714	9007082
8	*70318513	*68771162	8470697	8374064	8	*07764938	*07613631	8912551	8815919
9	*67290443	*65809724	8279534	8182901	9	*07449701	*07285772	8721388	8624756
10	*64392768	*62975813	8088371	7991738	60	*07128901	*06972030	8530226	8433593
1	*61619874	*60263935	7897208	7800575	1	*06821915	*06671799	8339063	8242430
2	*58966386	*57668838	7706045	7609412	2	*06528148	*06384497	8147900	8051267
3	*56427164	*55185491	7514882	7418249	3	*06247032	*06109567	7956737	7860104
4	*53997287	*52809082	7323719	7227086	4	*05978021	*05846475	7765574	7668941
5	*51672044	*50535006	7132556	7035923	5	*05720594	*05594713	7574411	7477778
6	*49446932	*48358858	6941393	6844760	6	*05474253	*05353792	7383248	7386615
7	*47317639	*46276419	6750230	6653598	7	*05238519	*05123246	7192085	7095453
8	*45280037	*44288655	6559067	6462435	8	*05012937	*04902628	7000922	6904290
9	*43330179	*42376703	6367904	6271272	9	*04797069	*04691510	6809759	6713127
20	*41464286	*40551869	6176742	6080109	70	*04591497	*04489484	6618596	6521964
1	*39678743	*38805617	5985579	5888946	1	*04392820	*04296156	6427433	6330801
2	*37970089	*37134561	5794416	5697783	2	*04203655	*04111155	6236271	6139638
3	*36335013	*35535465	5603253	5506620	3	*04022637	*03934119	6045108	5948475
4	*34770347	*34005230	5412090	5315457	4	*03849413	*03764707	5853945	5757312
5	*33273060	*32540890	5220927	5124294	5	*03683649	*03602591	5662782	5566149
6	*31840249	*31139607	5029764	4933131	6	*03525023	*03447456	5471619	5374986
7	*30469137	*29798667	4838601	4741968	7	*03373228	*03299000	5280456	5183824
8	*29157069	*28515471	4647438	4550806	8	*03227969	*03156937	5089293	4992661
9	*27901502	*27287532	4456275	4359643	9	*03088965	*03020992	4898130	4801498
30	*26700001	*26112471	4265113	4168480	80	*02955947	*02890902	4706968	4610335
1	*25550241	*24988010	4073950	3977317	1	*02828658	*02766414	4515805	4419172
2	*24449991	*23911972	3882787	3786154	2	*02706850	*02647286	4324642	4228009
3	*23397121	*22882280	3691624	3594991	3	*02590287	*02533288	4133479	4036846
4	*22389589	*21896909	3500461	3403828	4	*02478744	*02424199	3942316	3845683
5	*21425444	*20953979	3309298	3212665	5	*02372003	*02319808	3751153	3654520
6	*20502817	*20051655	3118135	3021502	6	*02269860	*02219912	3559990	3463357
7	*19619921	*19188187	2926972	2830340	7	*02172115	*02124318	3368827	3272195
8	*18775044	*18361901	2735809	2639177	8	*02078579	*02032839	3177664	3081032
9	*17966549	*17571197	2544646	2448014	9	*01989070	*01945301	2986501	2889869
40	*17192870	*16814543	2353484	2256851	90	*01903417	*01861532	2795339	2698706
1	*16452507	*16090472	2162321	2065688	1	*01821451	*01781371	2604176	2507543
2	*15744026	*15397581	1971158	1874525	2	*01743016	*01704661	2413013	2316380
3	*15066054	*14734527	1779995	1683362	3	*01667958	*01631255	2221850	2125217
4	*14417276	*14100026	1588832	1492199	4	*01596132	*01561009	2030687	1934054
5	*13796437	*13492848	1397669	1301036	5	*01527399	*01493789	1839524	1742891
6	*13202332	*12911816	1206506	1109873	6	*01461626	*01429463	1648361	1551728
7	*12633810	*12355805	1015343	0918711	7	*01398685	*01367907	1457198	1360566
8	*12089771	*11823736	0824180	0727548	8	*01338454	*01309001	1266035	1169403
9	*11569158	*11314580	0633017	0536385	9	*01280817	*01252634	1074872	0978240
					100	*01225663		T.0883710	T.0787077

NOTE.— v^{x+1} is $v^x \times \frac{1}{1.0225}$

TABLE for converting ANNUITIES into REVERSIONS, *i.e.*, sums payable on decease.
Interest Four and a Half per Cent.

a_x	A_x	a_x	A_x	a_x	A_x	a_x	A_x
0·045	·955	5·688	·712	11·331	·469	16·974	·226
0·254	·946	5·897	·703	11·540	·460	17·183	·217
0·463	·937	6·106	·694	11·749	·451	17·392	·208
0·672	·928	6·315	·685	11·958	·442	17·601	·199
0·881	·919	6·524	·676	12·167	·433	17·810	·190
1·090	·910	6·733	·667	12·376	·424	18·019	·181
1·299	·901	6·942	·658	12·585	·415	18·238	·172
1·508	·892	7·151	·649	12·794	·406	18·457	·163
1·717	·883	7·360	·640	13·003	·397	18·646	·154
1·926	·874	7·569	·631	12·212	·388	18·855	·145
2·135	·865	7·778	·622	13·421	·379	19·064	·136
2·344	·856	7·987	·613	13·630	·370	19·273	·127
2·553	·847	8·196	·604	13·839	·361	19·482	·118
2·762	·838	8·405	·595	14·048	·352	19·691	·109
2·971	·829	8·614	·586	14·257	·343	19·900	·100
3·180	·820	8·823	·577	14·466	·334	20·109	·091
3·389	·811	9·032	·568	14·675	·325	20·318	·082
3·598	·802	9·241	·558	14·884	·316	20·527	·073
3·807	·793	9·450	·550	15·093	·307	20·736	·064
4·016	·784	9·659	·541	15·302	·298	20·945	·055
4·225	·775	9·868	·532	15·511	·289	21·154	·046
4·434	·766	10·077	·523	15·720	·280	21·363	·037
4·643	·757	10·286	·514	15·929	·271	21·572	·028
4·852	·748	10·495	·505	16·138	·262	21·781	·019
5·061	·739	10·704	·496	16·347	·253	21·990	·010
5·270	·730	10·913	·487	16·556	·244	22·199	·001
5·479	·721	11·122	·478	16·765	·235		

THIRD AND FOLLOWING FIGURES OF A_x .

A_x	0.	1.	2.	3.	4.	5.	6.	7.	8.	9.
·00	0 0000	0431	0861	1292	1722	2153	2584	3014	3445	8876
·01	0 4306	4737	5167	5598	6029	6459	6890	7330	7751	8182
·02	0 8612	9043	9474	9904	*0335	*0766	*1196	*1627	*2057	*2488
·03	1 2919	3349	3780	4211	4641	5072	5502	5933	6364	6794
·04	1 7225	7656	8086	8517	8947	9378	9809	*0239	*0670	*1100
·05	2 1531	1962	2392	2823	3254	3684	3116	4545	4976	5407
·06	2 5837	6268	6699	7129	7560	7990	8421	8852	9282	9713
·07	3 0144	0574	1005	1435	1866	2297	2727	3158	3589	4019
·08	3 4450	4880	5311	5742	6172	6603	7033	7464	7895	8325
·09	3 8756	9187	9617	*0048	*0478	*0909	*1340	*1770	*2201	*2632
·10	4 3062	3493	3923	4354	4785	5215	5646	6077	6507	6938
·11	4 7368	7799	8230	8660	9091	9521	9952	0382	0813	1244
·12	5 1675	2105	2536	2967	3397	3828	4258	4689	5120	5550
·13	5 5981	6411	6842	7272	7703	8134	8565	8995	9426	8856
·14	6 0287	0718	1148	1579	2010	2440	2871	3301	3732	4163
·15	6 4593	5024	5455	5885	6316	6746	7177	7608	8038	8469
·16	6 8900	9330	9761	*0191	*0622	*1053	*1483	*1914	*2344	*2775
·17	7 3206	3636	4067	4498	4928	5359	5789	6220	6651	7081
·18	7 7512	7943	8373	8804	9234	9665	*0096	*0526	*0957	*1388
·19	8 1818	2249	2679	3110	3541	3971	4402	4833	5263	5694
·20	8 6124	6555	6986	7416	7847	8277	8708	9139	9569	

Note.—The first figure in Column 0 is common to all the columns, and the asterisk shows that this leading figure is to be taken from the line next below. Thus, for example, the value for ·024 is 1 0335.

Find in Column a_x the value next above that of the given annuity, and note the difference. Then, to the value of A_x so found in the upper part of the Table, add the value for the difference, as found in the lower part of the Table. For example,—

Given annuity $a_x = 13·475$
 Next above - - - 13·630 ·370
 Difference - - - ·155 66746
 Corresponding value of $A_x =$ - ·3766746

INTEREST BEING $4\frac{1}{2}$ PER CENT.

Table showing the Addition to Annuities when made payable half yearly and to the day of Decease.

Annuities.	Addition.	Annuities.	Addition.	Annuities.	Addition.	Annuities.	Addition.	Annuities.	Addition.
0·045	·494	4·045	·450	8·044	·406	12·043	·362	16·042	·318
·136	·493	135	·449	135	·405	134	·361	133	·317
·227	·492	226	·448	225	·404	225	·360	224	·316
·318	·491	317	·447	316	·403	315	·359	315	·315
·409	·490	408	·446	407	·402	406	·358	405	·314
·500	·489	499	·445	498	·401	497	·357	496	·313
·591	·488	590	·444	589	·400	588	·356	587	·312
·682	·487	681	·443	680	·399	679	·355	678	·311
·773	·486	772	·442	771	·398	770	·354	769	·310
·863	·485	863	·441	862	·397	861	·353	860	·309
·954	·484	953	·440	953	·396	952	·352	951	·308
1·045	·483	5·044	·439	9·043	·395	13·043	·351	17·042	·307
·136	·482	135	·438	134	·394	133	·350	133	·306
·227	·481	226	·437	225	·393	224	·349	223	·305
·318	·480	317	·436	316	·392	315	·348	314	·304
·409	·479	408	·435	407	·391	406	·347	405	·303
·500	·478	499	·434	498	·390	497	·346	496	·302
·591	·477	590	·433	589	·389	588	·345	587	·301
·681	·476	681	·432	680	·388	679	·344	678	·300
·772	·475	771	·431	771	·387	770	·343	769	·299
·863	·474	862	·430	861	·386	861	·342	860	·298
·954	·473	953	·429	952	·385	951	·341	951	·297
2·045	·472	6·044	·428	10·043	·384	14·042	·340	18·041	·296
·136	·471	135	·427	134	·383	133	·339	132	·295
·227	·470	226	·426	225	·382	224	·338	223	·294
·318	·469	317	·425	316	·381	315	·337	314	·293
·409	·468	408	·424	407	·380	406	·336	405	·292
·499	·467	499	·423	498	·379	497	·335	496	·291
·590	·466	589	·422	589	·378	588	·334	587	·290
·681	·465	680	·421	679	·377	679	·333	678	·289
·772	·464	771	·420	770	·376	769	·332	769	·288
·863	·463	862	·419	861	·375	860	·331	859	·287
·954	·462	953	·418	952	·374	951	·330	950	·286
3·045	·461	7·044	·417	11·043	·373	15·042	·329	19·041	·285
·136	·460	135	·416	134	·372	133	·328	132	·284
·227	·459	226	·415	225	·371	224	·327	223	·283
·317	·458	317	·414	316	·370	315	·326	314	·282
·408	·457	407	·413	407	·369	406	·325	405	·281
·499	·456	498	·412	497	·368	497	·324	496	·280
·590	·455	589	·411	588	·367	587	·323	587	·279
·681	·454	680	·410	679	·366	678	·322	677	·278
·772	·453	771	·409	770	·365	769	·321	768	·277
·863	·452	862	·408	861	·364	860	·320	859	·276
·954	·451	953	·407	952	·363	951	·319	950	·275

To use the Table.—Find in the table the annuity nearest in value to the proposed annuity, and take out the quantity opposite thereto. Add this to the proposed annuity.

Example.—Suppose the given annuity to be worth 10·325 years' purchase. Then in the table the nearest value is 10·316, opposite to which is the addition ·381, therefore $10·325 + ·381 = 10·706$ is the augmented value, as required.

EXCHANGE TABLE.—Pounds into Rupees, at 1s. 11d.

					For Pounds + Rupees.	—	For Shillings. + Rupees.	—	For Pence. + Rupees.	Fractional Equivalents.	
Ra.	Ra.	Ra.	Ra.	Ra.							
0	240	480	720	960							
£	£	£	£	£		Shillings		Pence.		Decimals.	Annas. Pies.
0	23	46	69	92	0·0000	0	0·0000	0	0·0000	·000	0 0
1	24	47	70	93	10·43478	1	0·5217	1	0·0434	·043	0 8
2	25	48	71	94	20·86956	2	1·0434	2	0·0869	·086	1 5
3	26	49	72	95	31·30434	3	1·5652	3	0·1304	·130	2 1
4	27	50	73	96	41·73913	4	2·0869	4	0·1739	·173	2 9
5	28	51	74	97	52·17391	5	2·6086	5	0·2173	·217	3 6
6	29	52	75	98	62·60869	6	3·1304	6	0·2608	·260	4 2
7	30	53	76	99	73·04347	7	3·6521	7	0·3043	·304	4 10
8	31	54	77		83·47826	8	4·1739	8	0·3478	·347	5 7
9	32	55	78		93·91304	9	4·6956	9	0·3913	·391	6 3
10	33	56	79		104·34782	10	5·2175	10	0·4347	·434	6 11
11	34	57	80		114·78260	11	5·7391	11	0·4782	·478	7 8
12	35	58	81		125·21739	12	6·2608			·521	8 4
13	36	59	82		135·65217	13	6·7826			·565	9 1
14	37	60	83		146·08695	14	7·3043			·608	9 9
15	38	61	84		156·52173	15	7·8260			·652	10 5
16	39	62	85		166·95652	16	8·3478			·695	11 2
17	40	63	86		177·39130	17	8·8695			·739	11 10
18	41	64	87		187·82608	18	9·3913			·782	12 6
19	42	65	88		198·26086	19	9·9130			·826	13 3
20	43	66	89		208·69565					·869	13 11
21	44	67	90		219·13043					·913	14 7
22	45	68	91		229·56521					·956	15 4

To use the Table.—Find the Pounds in one of the columns headed Pounds, then will the sum of the numbers at the top and in the margin express the value in Rupees.

Example :—

Required the equivalent of 73l.—Here, 720 + 41·739 = Rs. 761. 11. 10.

Required the equivalent of 730l.—Here, 7200 + 417·391 = Rs. 7,617. 6. 3.

Required the equivalent of 15l. 11s. 7d.—Here, 15l. = 156·522

11s. = 5·739

10d. = 0·304

161·565 = Rs. 161. 9. 1.

Note.—The value of the decimals in annas and pies will always be found in the small table of fractional equivalents

EXCHANGE.—Rupees into Pounds, at 1s. 11d.

£	£	£	£	£	£	£	£	£	£	£		
0·0	2·3	4·6	6·9	9·2	11·5	13·8	16·1	18·4	20·7			
Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.	Ra.			
0	24	48	72	96	120	144	168	192	216	0·00000		
1	25	49	73	97	121	145	169	193	217	0·09583		
2	26	50	74	98	122	146	170	194	218	0·19166		
3	27	51	75	99	123	147	171	195	219	0·28750	Annas.	£
4	28	52	76	100	124	148	172	196	220	0·38333	1	·0060
5	29	53	77	101	125	149	173	197	221	0·47916	2	·0120
6	30	54	78	102	126	150	174	198	222	0·57500	3	·0180
7	31	55	79	103	127	151	175	199	223	0·67083	4	·0240
8	32	56	80	104	128	152	176	200	224	0·76666	5	·0299
9	33	57	81	105	129	153	177	201	225	0·86250	6	·0359
10	34	58	82	106	130	154	178	202	226	0·95833	7	·0419
11	35	59	83	107	131	155	179	203	227	1·05416	8	·0479
12	36	60	84	108	132	156	180	204	228	1·15000	9	·0539
13	37	61	85	109	133	157	181	205	229	1·24583	10	·0599
14	38	62	86	110	134	158	182	206	230	1·34166	11	·0659
15	39	63	87	111	135	159	183	207	231	1·43750	12	·0719
16	40	64	88	112	136	160	184	208	232	1·53333	13	·0779
17	41	65	89	113	137	161	185	209	233	1·62916	14	·0839
18	42	66	90	114	138	162	186	210	234	1·72500	15	·0898
19	43	67	91	115	139	163	187	211	335	1·82083		
20	44	68	92	116	140	164	188	212	736	1·91666		
21	45	69	93	117	141	165	189	213	237	2·01250		
22	46	70	94	118	142	166	190	214	238	2·10833		
23	47	71	95	119	143	167	191	215	239	2·20416		

To use the Table.—Find the Rupees in one of the columns headed Rupees, then will the sum of the numbers at the top and in the margin express the value in Pounds.

Example :—

Required the equivalent of Rs. 761. 11. 10,—

Rs. 760 = 69

+ 3·8333

„ 1 = 0·0958

As. 11 = 0·0659

Pies 10 = 0·005

£73·0000

Note.—The value of one pie is ·0005 very nearly.

TABLE SHOWING THE RATE OF MARRIAGE. From the Fourteenth Annual Report of the Registrar General, page viii.

ENGLAND.—Number of Bachelors, Spinsters, Widowers, and Widows, at different Ages, who were enumerated; also the Proportions who were married in the Year 1851.

Age.	Numbers enumerated in 1851.				Estimated Numbers married in 1851. (<i>See note.</i>)				Proportion married to 100 living.			
	Bachelors.	Spinsters.	Widowers.	Widows.	Bachelors.	Spinsters. •	Widowers.	Widows.	Bachelors.	Spinsters.	Widowers.	Widows.
Total -	2297759	2306009	333926	661894	132643	140331	21563	13875	5·773	6·085	6·457	2·096
15	869325	861453	76	260	4035	18807	—	13	·464	2·183	—	—
20	633842	598732	2168	4326	71049	75872	667	850	11·209	12·672	30·766	5·000
25	308363	306607	8290	14303	37647	29136	2967	2132	12·209	9·503	35·790	19·649
30	159956	163604	14249	26328	12558	9857	4079	3057	7·851	6·025	28·627	14·906
35	95889	99443	18584	34839	4371	3759	3775	2527	4·558	3·780	20·313	11·611
40	67380	71520	24576	49207	1885	1789	3459	2132	2·798	2·501	14·075	7·253
45	47522	51044	27172	54868	688	724	2407	1466	1·448	1·418	8·858	4·333
50	37155	43102	34057	70033	262	258	1945	909	·705	·599	5·711	2·672
55	25815	30823	32586	67181	90	96	1043	491	·349	·311	3·201	1·298
60	21649	29550	41725	88283	33	25	728	213	·152	·085	1·745	·731.
65	13055	19319	37567	77698	19	5	324	53	·146	·026	·862	·241
70	9629	15217	39284	74625	3	—	124	19	·031	—	·316	·068
75	5068	8837	28139	52527	3	—	28	8	·059	—	·100	·025
80 and upwards.	3111	6758	25453	47416	—	3	17	5	—	·044	·067	·011

The Table may be read thus :—Of the persons enumerated in 1851, of the age of 20 and under 25, there were 633,842 Bachelors, 598,732 Spinsters, 2,168 Widowers, and 4,326 Widows, while the numbers who were married during the same year and of the same ages were respectively 71,049, 75,872, 667, and 850, being in the proportion of 11·209 Bachelors, 12·672 Spinsters, 30·766 Widowers, and 19·649 Widows married to every 100 living, and so on at other ages. By disregarding the decimal point, the proportions to 10,000 will be represented.

Note.—Of the total number of marriages solemnized in 1851, the ages of the Males and Females were stated only of the following numbers, viz., 48,555 Bachelors, 51,141 Spinsters, 7,792 Widowers, and 5,206 Widows. In this Table these numbers have been proportionally raised to the total numbers married under these respective headings.

My dear Dr. Farr,

London,
26th February 1870.

Having occasion to make a practical application of the rate of marriage among spinsters, I some time since mentioned the matter to you, and you have kindly placed in my hands the Fourteenth Report of the Registrar-General, where, in p. viii, a table (V. c.) is given to show approximately the rate of marriage at different ages for bachelors, spinsters, widowers, and widows.

Of these rates that for spinsters is considerably the lowest. For this class I have supplied the intermediate years by interpolation with differences to the fourth order, and the result is a well graduated scale, which I send herewith.

The benefits derived from the several Funds established in India terminate on remarriage. It has, therefore, been necessary to ascertain the rate of marriage for this class. Investigations on scant data were made by the late Mr. Griffith Davies, by Mr. Neison, and by Mr. Samuel Brown. I have entered some of the results in the table, and you will observe that they are much below the British spinsters' rate. One reason for this may be that the loss of pension restricts marriage.

Comparing the British spinsters and the Indian widows' marriage rates, it seems reasonable to ask whether the widows' rate could fairly be applied to the class for whom I am at present concerned, namely, the daughters of Indian Officers, and if not, how far could the British spinsters' rate be held applicable?

The forfeiture of pensions on marriage has not the same restrictive effect on spinsters as on widows. The pensions are small, and besides this, many daughters marry in their father's lifetime, when their interest in the pension is only reversionary.

It is noticeable that in the Table V. c., the rate of marriage of widows greatly exceeds that of first marriages, but if the British spinsters' rate be compared with the Indian widows' rate, the reverse of this obtains.

Perhaps a safe rate, following the same law of progression as the spinsters' rate, may be deduced by taking an uniform percentage from the British table. Thus, at the age of 20, deducting one-fifth, the marriage rate would become 10.118 per cent. as a maximum, instead of 12.672, and so throughout. Even thus, I find that there would be a wide departure from the Indian widows' rate.

The question is important, and its determination will affect large pecuniary interests. Safety is on either hand advantageous, but the exaction of an over-high premium, when only safety and not profit is sought, would be unjust.

In a conflict of data, the leaning must ever be to the largest and most authentic body of facts. That the census of 1851, with its 2,306,009 spinsters and 140,331 marriages, is more to be relied on, than an experience drawn from 635 widows and 119 remarriages, is not open to dispute. But the smaller experience, as applicable to a class, has much weight. I am therefore disposed to reduce the British rate for the purpose in hand.

How far such a reduction should be carried must partly rest on opinion. I submit the subject to you because I have your permission to do so, and because I rely on your judgment.

With sincere apologies for this trespass on your time and attention,

I am, &c.,
(Signed) J. HANNYNGTON.

W. Farr, Esq., M.D.

General Register Office, Somerset House,
7th March 1870.

My dear General Hannyngton,

I have read your paper and the table interpolated, which you have had the goodness to send me. The subject is most difficult, as you are dealing with a class in peculiar conditions, and the observations at your disposal are limited.

Your view appears to be judicious. You take into account all the data relating to the class, and the estimate of the best authorities, and then, after reasoning on probable results, you turn to account the experience of the whole nation in fixing the quota of marriage at the several ages. You must, I imagine, assume that your widows will marry at a slower rate than our spinsters, although in England widows marry more frequently than spinsters. But widows have often fortunes or perquisites, which tempt, while your widows, losing income, may be deterred from marriage, or deter future husbands.

It is a special case. But I know you have given the subject so much thought that I should be quite willing myself to act on your decision.

At the end of every five years you will naturally investigate the progress, and should take power to alter the scheme in accordance with the results of experience.

I am, &c.,
(Signed) WILLIAM FARR.

DIFFERENCES FOR INTERPOLATION. MARRIAGES PER CENT., SPINSTERS. DATA FROM
14TH REPORT OF THE REGISTRAR GENERAL.

	+	Δ_1	-	Δ_2	+	Δ_3	-	Δ_4
2183	+	10489	-	13658	+	13349	-	11807
12672	-	3169	-	309	+	1542	-	1809
9503	-	3478	+	1233	-	267	-	503
6025	-	2245	+	966	-	770	+	838
3780	-	1279	+	196	+	68	+	199
2501	-	1083	+	264	+	267	-	736
1418	-	819	+	531	-	469		
599	-	288	+	62				
311	-	226						
85								

	+	Δ_1	-	Δ_2	+	Δ_3	-	Δ_4	
		.2		.08		.048		.0336	
		.4		.12		.064		.0416	
		.6		.12		.056		.0336	
		.8		.08		.032		.0176	
									Military Officers' Widows.
									S. Brown : Neison :
									Bengal, Bengal.
									Madras,
									Bombay.
15								2.183	10.69
	+	10489	+	4228				6.411	
	+	13658		7180				9.363	
	+	13349		9077				11.260	6.849
	+	11807		10119				12.302	
20								12.672	7.10
	-	3169	-	474				12.198	
	+	309		1059				11.615	
	+	1542		1717				10.955	5.102
	+	1809		2429				10.243	
25								9.503	4.88
	-	3478	-	790				8.713	
	-	1233		1535				7.968	
	-	267		2233				7.270	3.329
	+	503		2881				6.622	
30								6.025	3.20
	-	2245	-	591				5.434	
	-	966		1098				4.927	
	-	770		1534				4.491	2.857
	-	838		1913				4.112	
35								3.780	1.68
	-	1279	-	275				3.505	
	-	196		539				3.241	
	+	68		794				2.986	1.653
	-	199		1040				2.740	
40								2.501	0.90
	-	1083	-	200				2.301	
	-	214		417				2.084	
	+	267		642				1.859	0.802
	+	736		866				1.635	
45								1.418	0.91
	+	819	+	617				1.216	
	-	264		441				1.040	
	-	68		257				.856	0.877
	-	838	+	111				.710	
50								.599	.67

ELEMENTS FOR COMPUTING THE DURATION OF UNMARRIED LIFE. FEMALES.

Age.	Proportions			(3) + (4) 1 - P _u	P _u	Log P _u
	Living.	Dying.	Marrying.			
15	.99445	.00555	.01746	.02301	.97699	9898901
6	400	.00600	.05129	.05729	.94271	9743781
7	345	.00655	.07490	.08145	.91855	9631028
8	282	.00718	.09008	.09726	.90274	9555627
9	214	.00786	.09842	.10628	.89372	9512015
20	144	.00856	.00137	.10993	.89007	9494242
1	121	.00879	.09758	.10637	.89363	9511577
2	100	.00900	.09292	.10192	.89808	9533150
3	079	.00921	.08764	.09685	.90315	9557599
4	059	.00941	.08194	.09135	.90865	9583966
5	039	.00961	.07602	.08563	.91437	9611220
6	019	.00981	.06970	.07951	.92049	9640191
7	000	.01000	.06374	.07374	.92626	9667329
8	.98981	.01019	.05816	.06835	.93165	9692528
9	962	.01038	.05297	.06335	.93665	9715773
30	943	.01057	.04820	.05877	.94123	9736958
1	924	.01076	.04347	.05423	.94577	9757855
2	904	.01096	.03942	.05038	.94962	9775499
3	884	.01116	.03593	.04709	.95291	9790519
4	863	.01137	.03290	.04427	.95573	9803352
5	842	.01158	.03024	.04182	.95818	9814471
6	820	.01180	.02804	.03984	.96016	9823436
7	797	.01203	.02593	.03796	.96204	9831931
8	774	.01226	.02389	.03615	.96385	9840095
9	749	.01251	.02192	.03443	.96557	9847838
40	723	.01277	.02001	.03278	.96722	9855253
1	696	.01304	.01841	.03145	.96855	9861220
2	668	.01332	.01667	.02999	.97001	9867762
3	638	.01362	.01487	.02849	.97151	9874473
4	606	.01394	.01308	.02702	.97298	9881039
5	573	.01427	.01134	.02561	.97439	9887328
6	538	.01462	.00973	.02435	.97565	9892940
7	502	.01498	.00832	.02330	.97670	9897612
8	463	.01537	.00685	.02222	.97778	9902411
9	422	.01578	.00568	.02146	.97854	9905786

DERIVED FROM ENGLISH LIFE TABLE. NO. 3. FEMALES.

With the Rate of Marriage reduced by one fifth, from 14th Report of Registrar General.

	Log P _u	Log l _u		Log P _u	Log l _u		Log P _u	Log l _u
0	1.9371604	6.0000000	40	1.9855258	5.0802771	80	1.9394234	4.2894835
1	9722410	5.9371604	1	9861320	0658024	1	9346135	2289069
2	9843554	9094014	2	9867762	0519244	2	9294933	1635204
3	9893710	8937568	3	9874473	0387006	3	9240517	0930137
4	9922523	8831278	4	9881039	0261479	4	9182778	4.0170654
5	9941950	8753801	5	9887328	0142518	5	9121607	3.9353432
6	9953928	8695751	6	9892940	5.0029846	6	9056896	9475039
7	9960392	8649679	7	9897612	4.9922786	7	8988532	7531935
8	9966496	8610071	8	9902411	9820398	8	8916408	6520467
9	9971161	8576567	9	9905786	9722809	9	8840415	5436875
10	9974514	8547728	50	9929018	9628595	90	8760443	4277290
1	9976674	8522242	1	9927015	9557613	1	8676383	3037733
2	9977764	8498916	2	9924906	9484628	2	8588123	1714113
3	9977906	8476680	3	9922685	9409534	3	8495557	3.0302239
4	9977924	8454586	4	9913715	9332219	4	8398575	2.8797796
5	9898901	8431810	5	9907919	9245934	5	8297066	7196371
6	9743781	8330711	6	9901864	9153853	6	8190921	5493437
7	9631028	8074492	7	9895440	9055717	7	8080033	3684358
8	9555627	7705520	8	9888536	8951157	8	7964288	2.1764391
9	9512015	7261197	9	9881047	8839693	9	7843582	1.9728679
20	9494242	6773212	60	9872859	8720740	100	7717801	7572261
1	9511577	6267454	1	9863865	8593599	1	7586838	5290062
2	9533150	5779031	2	9853955	8457464	2	7450583	3876900
3	9557599	5312181	3	9843019	8311419	3	7308927	0327483
4	9583996	4869780	4	9830950	8154438	4	7161761	0.7636410
5	9611220	4453776	5	9817635	7985388	5	7008974	4798171
6	9640191	4064996	6	9802967	7803023	6	6850457	1807145
7	9667329	3705187	7	9786837	7605990	7	6686102	1.8657602
8	9692528	3372516	8	9769134	7392827	8	6515799	5343704
9	9715773	3065044	9	9749749	7161961			1859503
30	9736958	2780817	70	9728573	6911710			
1	9757855	2517775	1	9705496	6640283			
2	9775499	2275630	2	9680410	6345779			
3	9790519	2051129	3	9653205	6026189			
4	9803352	1841648	4	9623770	5679394			
5	9814471	1645000	5	9591998	5303164			
6	9823436	1459471	6	9557777	4895162			
7	9831931	1282907	7	9521001	4452939			
8	9840095	1114838	8	9481557	3973940			
9	9847838	5.0954933	9	9439338	4.3455497			

LOGARITHMS FOR COMPUTING $D_{x,y}$, AND $D_{x^2,y}$

x or y	Log. l_x	Log. D_y	Log. d_x	Log. B_y	Numbers.	
					d_x	B_y
15		3.0652451		4.0681829		11699.920
6		0418595		0371105		10892.071
7		3.0184316		4.0125905		10294.173
8	4.9852917	2.9949604	3.1283993	3.9962777	1344	9914.657
9	9792114	9714452	1809856	9845847	1517	9651.2728
20	4.9722445	2.9478850	3.2224563	3.9725715	1669	9387.9656
1	9644482	9242788	2521246	9600950	1787	9122.1032
2	9559426	9006256	2732328	9469881	1876	8850.9147
3	9468304	8769246	2862319	9329509	1933	8569.4095
4	9372370	8531747	2922561	9174886	1960	8269.6776
5	9272882	8293747	2918127	9004230	1958	7951.0233
6	9171167	8055238	2857823	8821412	1931	7623.2690
7	9068466	7816206	2803507	8631058	1907	7296.3516
8	8964601	7576641	2753114	8433381	1885	6971.6905
9	8859433	7334292	2704459	8243275	1864	6673.0981
30	4.8752870	2.7089063	3.2662317	3.8041409	1846	6370.0213
1	8644695	6840865	2619762	7825890	1828	6061.6226
2	8534853	6596556	2567177	7619667	1806	5780.5171
3	8423533	6335079	2501759	7404723	1779	5501.3909
4	8311016	6079646	2427898	7185212	1749	5230.2359
5	8197479	5820811	2340108	6954180	1714	4959.2729
6	8083258	5560906	2245331	6713483	1677	4691.8946
7	7968517	5297380	2145790	6457805	1639	4423.6476
8	7853370	5032627	2046625	6193692	1602	4162.6426
9	7737791	4764002	1945143	5915014	1565	3903.9246
40	4.7621832	2.4493971	3.1841234	3.5623218	1528	3650.2437
1	7505547	4219776	1734776	5314582	1491	3399.8378
2	7388994	3941205	1631614	4996387	1456	3159.6478
3	7272077	3660839	1532049	4666837	1423	2928.7594
4	7154685	3375724	1433271	4332293	1391	2711.6231
5	7036782	3088533	1338581	3984411	1361	2502.8669
6	6918238	2796159	1245042	3631690	1332	2307.6452
7	6799001	2501370	1126050	3273923	1296	2125.1627
8	6679757	2204047	0979511	2914096	1253	1956.1832
9	6561270	1904065	0806265	2552800	1204	1800.0301
50	4.644287	2.1597960	3.0606978	3.2198756	1150	1659.1116
1	6329531	1288729	0382226	1837129	1092	1526.5567
2	6217681	0972681	0203613	1470642	1048	1403.0207
3	6107560	0652934	3.0077478	1096021	1018	1287.0692
4	5997849	0329264	2.9995655	0714789	999	1178.9052
5	5887422	2.0001424	9965117	3.0328148	992	1078.4867
6	5774918	1.9669142	2.9973864	2.9993156	994	984.34112
7	5659186	9332120	3.0030295	9520578	1007	895.48367
8	5538709	8990029	0128372	9091046	1030	811.15625
9	5411822	8642503	0257154	8641285	1061	731.35539
60	4.5277330	1.8289137	3.0413927	2.8174589	1100	656.83887
1	5133242	7929477	0584260	7691010	1144	587.62593
2	4978139	7563014	0744507	7190617	1187	523.66866
3	4811128	7189177	0895519	6676530	1229	465.21421
4	4631162	6807318	1031193	6148733	1268	411.97720
5	4437322	6416699	1149444	5606992	1303	363.66303
6	4228688	6016477	1251558	5050070	1334	319.89465
7	4004171	5605680	1351327	4476552	1365	280.32064
8	3761753	5183181	1439511	3885365	1393	244.64507
9	3499571	4747663	1513699	3267492	1417	212.20186
70	4.3215570	1.4290155	3.1568519	2.2635340	1435	183.45606
1	2907690	3815239	1598678	1963908	1445	157.17765
2	2573905	3320480	1613680	1281932	1450	134.33624
3	2211011	2802891	1604685	2.0552905	1447	113.57702
4	1815864	2258750	1568519	1.9808476	1435	95.68581
5	1384922	1694226	1495270	9026423	1411	79.91755
6	0914911	1094548	1383027	8213315	1375	66.27226
7	4.0402066	1.0465595	1218880	7353251	1324	54.36571
8	3.9843473	0.9802210	1003705	6449680	1260	44.15377
9	9235549	9097687	0729847	5512741	1183	35.58556
80	3.8575134	0.8343088	3.0398106	1.4518730	1096	28.30563
1	7858279	7547766	3.0004341	3479337	1001	22.28095
2	7080808	6679926	2.9542425	2329689	900	17.09893
3	6238693	5747159	9009131	1.1161440	796	13.06604
4	5327544	4734128	8401061	0.9834857	692	9.62688
5	4342495	3618870	7715871	8470494	591	7.03152
6	3277675	2424897	6946052	7034355	495	5.05167
7	2127202	0.1150340	6063814	5459283	404	3.51502
8	3.0891984	1.9805242	5092025	3808676	323	2.40363
9	2.9566486	8427181	4014005	2271963	252	1.68731
90	2.8149132	1.6945072	2.2855573	0.0360305	193	1.086502
1	6627578	5391712	1553360	1.8819138	143	761928
2	5010593	3874293	2.0334238	6873962	108	486851
3	3201463	1.2221850	1.9030900	4674080	80	293365
4	2.1105897	1.9814200	7558749	1.1211863	57	132186
5	1.8573325	6610737	5682017	1.7702260	37	058915
6	5440680	1.1648361	3222193	1.1011385	21	025773
7	1.1461280		1.0000000		10	
8	0.6020600		0.4771213		3	
9	0.0000000		0.0000000		1	

NOTE.—Log. l_x + Log. D_y = Log. $D_{x,y}$; and Log. d_x + Log. B_y = Log. $D_{x^2,y}$; the logarithms of the whole series, for every value of x and y may be derived from these, they are given here to afford a ready means of verifying the values that have been

ANNUITIES,
SINGLE LIFE, JOINT LIVES, REVERSIONARY ;
WITH SUBSIDIARY CALCULATIONS.

INDIAN ARMY OFFICERS.—ANNUITIES AND ASSURANCES, 4½ PER CENT.

x	D_x	N_x	D_x^{-1}	a_x	A_x
18	4377.22	61989.67	22845	14.162	.347091
19	4130.67	57859.00	24209	14.007	.353766
20	3889.76	53969.24	25709	13.875	.359450
21	3659.00	50310.24	27337	13.753	.364703
22	3430.60	46879.64	29149	13.665	.369493
23	3214.92	43664.72	31105	13.582	.372067
24	3009.03	40655.69	33233	13.511	.375124
25	2814.23	37841.46	35534	13.447	.377880
26	2630.96	35210.50	38009	13.383	.380636
27	2458.86	32751.64	40669	13.319	.383392
28	2297.29	30454.35	43529	13.256	.386105
29	2145.62	28308.73	46607	13.194	.388775
30	2003.57	26305.16	49911	13.129	.391574
31	1870.02	24435.14	53475	13.067	.394244
32	1745.00	22690.14	57307	13.003	.397000
33	1627.50	21062.64	61444	12.942	.399627
34	1517.57	19545.07	65895	12.879	.402340
35	1414.72	18130.35	70685	12.815	.405096
36	1318.74	16811.61	75830	12.748	.407981
37	1228.99	15582.62	81368	12.679	.410952
38	1145.28	14437.34	87315	12.606	.414098
39	1067.21	13370.128	93702	12.528	.417455
40	994.264	12375.864	10058	12.448	.420900
41	926.441	11449.423	10794	12.359	.424732
42	863.088	10586.335	11586	12.265	.428780
43	803.924	9782.411	12439	12.168	.432957
44	748.833	9033.578	13354	12.063	.437478
45	697.410	8336.168	14339	11.953	.442215
46	649.291	7686.877	15401	11.839	.447124
47	604.628	7082.349	16542	11.716	.452421
48	562.900	6519.449	17765	11.582	.458191
49	524.083	5995.366	19081	11.440	.464306
50	488.229	5507.137	20482	11.280	.471196
51	455.022	5052.115	21077	11.103	.478818
52	424.377	4627.738	23564	10.905	.487344
53	395.916	4231.822	25258	10.689	.496646
54	369.398	3862.424	27071	10.456	.506679
55	344.607	3517.817	29018	10.208	.517359
56	321.351	3196.466	31119	9.947	.528598
57	299.459	2897.007	33393	9.674	.540354
58	278.701	2618.306	35881	9.395	.552368
59	259.026	2359.280	38606	9.108	.564727
60	240.315	2118.965	41612	8.817	.577258
61	222.463	1896.502	44951	8.525	.589833
62	205.376	1691.126	48691	8.234	.602364
63	189.160	1501.966	52865	7.940	.615024
64	173.661	1328.305	57583	7.649	.627555
65	158.918	1169.387	62926	7.358	.640086
66	144.958	1024.429	68985	7.067	
67	131.696	892.733	75932	6.779	
68	119.208	773.525	83887	6.489	
69	107.406	666.119	93105	6.202	
70	96.263	569.856	10388	5.920	
71	85.792	484.064	11656	5.642	
72	76.044	408.020	13150	5.365	
73	66.937	341.083	14939	5.095	
74	58.472	282.611	17102	4.833	
75	50.687	231.924	19729	4.576	
76	43.534	188.390	22971	4.328	
77	37.004	151.386	27024	4.091	
78	31.150	120.236	32103	3.860	
79	25.916	94.320	38586	3.639	
80	21.283	73.037	46986	3.432	
81	17.283	55.754	57860	3.226	
82	13.832	41.922	72296	3.031	
83	10.905	31.017	91701	2.844	
84	8.452	22.565	11832	2.670	
85	6.452	16.113	15499	2.497	
86	4.835	11.278	20683	2.333	
87	3.541	7.737	28241	2.185	
88	2.557	5.180	39108	2.026	
89	1.810	3.370	55249	1.862	
90	1.237	2.133	80841	1.724	
91	0.8379	1.2950	11935	1.546	
92	.5578	0.7372	17928	1.322	
93	.3503	0.3869	28547	1.104	
94	.2075	0.1794	48193	0.865	
95	.1069	0.0725	93545	0.678	
96	.0585	0.0140	17094	0.239	
97	.0140	0.0000			

ANNUITIES—SINGLE LIVES, WIDOWS, 4½ PER CENT.

w	l_w	D_w	N_w	a_w	$\frac{1+R}{4}$	Pensions.
15	67344	34798.02	351090.86	10.089	384	10.473
6	65560	32417.41	318673.45	9.830	386	10.216
7	62807	29718.79	288954.66	9.723	388	10.111
8	59199	26805.33	262149.33	9.780	387	10.167
9	54680	23692.94	238456.39	10.064	384	10.448
20	50642	20998.34	217458.05	10.356	381	10.737
1	47065	18674.80	198783.25	10.644	377	11.021
2	43885	16663.17	182120.08	10.929	374	11.303
3	41087	14928.97	167191.11	11.199	371	11.570
4	38622	13429.00	153762.11	11.450	369	11.819
5	36511	12148.32	141613.78	11.657	366	12.023
6	34670	11039.01	130574.77	11.828	364	12.192
7	33031	10064.26	120510.511	11.974	363	12.337
8	31547	9198.181	111312.330	12.110	361	12.471
9	30183	8421.510	102890.820	12.218	360	12.578
30	28866	7707.222	95183.598	12.432	358	12.790
1	27616	7055.955	88127.643	12.490	357	12.847
2	26443	6465.311	81662.332	12.631	355	12.986
3	25354	5932.106	75730.226	12.766	354	13.120
4	24353	5452.537	70277.689	12.889	353	13.242
5	23447	5023.624	65254.065	12.989	352	13.341
6	22628	4639.377	60614.688	13.065	351	13.416
7	21889	4294.605	56320.083	13.114	350	13.464
8	21225	3985.003	52335.080	13.133	350	13.483
9	20626	3705.780	48629.300	13.123	350	13.473
40	20098	3455.423	45173.877	13.073	351	13.424
1	19625	3228.804	41945.073	12.991	352	13.343
2	19191	3021.436	38923.637	12.882	353	13.235
3	18786	2830.309	36093.328	12.752	354	13.106
4	18400	2652.779	33440.549	12.606	356	12.962
5	18032	2487.774	30952.775	12.442	357	12.799
6	17670	2332.852	28619.923	12.268	360	12.628
7	17305	2186.281	26433.642	12.091	362	12.453
8	16931	2046.919	24386.723	11.914	363	12.277
9	16543	1913.886	22472.837	11.742	365	12.107
50	16118	1784.418	20688.419	11.594	367	11.961
1	15672	1660.327	19028.092	11.464	368	11.832
2	15219	1542.904	17485.188	11.333	370	11.703
3	14772	1433.098	16052.090	11.200	371	11.571
4	14351	1332.301	14719.789	11.048	373	11.421
5	13919	1236.551	13483.238	10.904	374	11.278
6	13497	1147.427	12335.811	10.751	376	11.127
7	13092	1065.068	11270.743	10.582	378	10.960
8	12713	989.6992	10281.0442	10.388	380	10.768
9	12371	921.6025	9359.4417	10.156	383	10.539
60	12043	858.5335	8500.9082	9.902	385	10.287
1	11725	799.8695	7701.0387	9.628	389	10.017
2	11411	744.9270	6956.1117	9.338	392	9.730
3	11092	692.9208	6263.1909	9.039	395	9.434
4	10758	643.1155	5620.0754	8.739	398	9.137
5	10410	595.5138	5024.5616	8.437	402	8.839
6	10047	549.9982	4474.6634	8.136	405	8.541
7	9669	506.5124	3968.0510	7.834	408	8.242
8	9276	465.0000	3503.0510	7.533	412	7.945
9	8869	425.4520	3077.5990	7.234	415	7.649
70	8449	387.8511	2689.7479	6.935	418	7.353
1	8015	352.0845	2337.6634	6.639	422	7.061
2	7570	318.2167	2019.4467	6.346	425	6.771
3	7114	286.1704	1733.2763	6.057	428	6.485
4	6648	255.9090	1477.3673	5.773	431	6.204
5	6177	227.5390	1249.8283	5.493	434	5.927
6	5701	200.9616	1048.8667	5.219	437	5.656
7	5224	176.2174	872.6493	4.952	440	5.392
8	4748	153.2640	719.3853	4.694	443	5.137
9	4279	132.1768	587.2085	4.443	446	4.889
80	3820	112.9172	474.29131	4.200	448	4.648
1	3376	95.49549	378.79582	3.967	451	4.418
2	2951	79.87914	298.91668	3.742	453	4.195
3	2550	66.05232	232.86436	3.525	456	3.981
4	2176	53.93747	178.92689	3.317	458	3.775
5	1832	43.45509	135.47180	3.118	460	3.578
6	1520	34.50187	100.96993	2.927	462	3.389
7	1242	26.97767	73.99226	2.743	464	3.207
8	997	20.72343	53.26883	2.570	466	3.036
9	786	15.63409	37.63474	2.407	468	2.875
90	608	11.57278	26.06196	2.252	470	2.722
1	460	8.37867	17.68329	2.111	472	2.583
2	341	5.94368	11.73961	1.975	473	2.448
3	248	4.13654	7.60307	1.838	474	2.312
4	176	2.80919	4.79388	1.707	476	2.183
5	122	1.86343	2.93045	1.573	477	2.050
6	83	1.21315	1.71730	1.415	479	1.894
7	55	0.76928	.94802	1.232	481	1.713
8	36	.48184	.46618	0.967	484	1.451
9	23	.29459	.17159	0.582	488	1.070
100	14	.17159	.00000	0.000	495	0.495

WIDOWS TILL REMARRIAGE OR DECEASE. MEAN VALUES.

Age. W.	Pension. $a_{w+\frac{1}{2}}$	Logarithms.	Age. W.	Pension. $a_{w+\frac{1}{2}}$	Logarithms.
15 to 16	10.345	1.0147305	58 to 59	10.654	1.0275127
16 " 17	10.164	1.0070647	59 " 60	10.413	1.0175759
17 " 18	10.139	1.0059951	60 " 61	10.152	1.0065516
18 " 19	10.308	1.0131744	61 " 62	9.874	0.9944931
19 " 20	10.593	1.0250190	62 " 63	9.582	0.9814562
20 " 21	10.879	1.0365890	63 " 64	9.286	0.9678287
21 " 22	11.162	1.0477420	64 " 65	8.988	0.9536631
22 " 23	11.437	1.0583121	65 " 66	8.690	0.9390198
23 " 24	11.695	1.0680002	66 " 67	8.392	0.9238655
24 " 25	11.921	1.0763127	67 " 68	8.094	0.9081632
25 " 26	12.108	1.0830724	68 " 69	7.797	0.8919275
26 " 27	12.265	1.0886676	69 " 70	7.501	0.8751192
27 " 28	12.404	1.0933518	70 " 71	7.207	0.8577545
28 " 29	12.525	1.0977777	71 " 72	6.916	0.8398550
29 " 30	12.684	1.1032562	72 " 73	6.628	0.8213825
30 " 31	12.819	1.1078541	73 " 74	6.345	0.8024316
31 " 32	12.917	1.1111617	74 " 75	6.066	0.7829024
32 " 33	13.053	1.1157103	75 " 76	5.792	0.7628286
33 " 34	13.181	1.1199484	76 " 77	5.524	0.7422537
34 " 35	13.292	1.1235903	77 " 78	5.265	0.7213984
35 " 36	13.379	1.1264237	78 " 79	5.013	0.7000977
36 " 37	13.440	1.1283993	79 " 80	4.769	0.6784273
37 " 38	13.474	1.1294965	80 " 81	4.533	0.6563857
38 " 39	13.478	1.1296255	81 " 82	4.307	0.6341749
39 " 40	13.449	1.1286900	82 " 83	4.088	0.6115109
40 " 41	13.384	1.1265859	83 " 84	3.878	0.5886078
41 " 42	13.289	1.1234923	84 " 85	3.677	0.5654936
42 " 43	13.171	1.1196187	85 " 86	3.484	0.5420781
43 " 44	13.034	1.1150777	86 " 87	3.298	0.5182507
44 " 45	12.881	1.1099496	87 " 88	3.122	0.4944329
45 " 46	12.714	1.1042822	88 " 89	2.956	0.4707044
46 " 47	12.542	1.0983668	89 " 90	2.798	0.4468477
47 " 48	12.365	1.0921941	90 " 91	2.653	0.4237372
48 " 49	12.192	1.0860750	91 " 92	2.516	0.4007106
49 " 50	12.034	1.0804100	92 " 93	2.380	0.3765770
50 " 51	11.897	1.0754375	93 " 94	2.248	0.3517963
51 " 52	11.768	1.0707027	94 " 95	2.117	0.3257209
52 " 53	11.637	1.0658410	95 " 96	1.972	0.2994909
53 " 54	11.496	1.0605468	96 " 97	1.803	0.2559957
54 " 55	11.350	1.0549959	97 " 98	1.582	0.1992065
55 " 56	11.203	1.0493343	98 " 99	1.260	0.1003705
56 " 57	11.044	1.0431264	99 " 100	0.782	9.8932068
57 " 58	10.864	1.0359898	100 " 101	0.247	9.3926970

N.B.—This table is to be used for the valuation of the pensions of incumbent widows.

EXTENDED VALUES OF $D_{x,y}$ FORMED BY ACTUAL MULTIPLICATION OF THE FACTORS I_x AND D_y ON THE ARITHMOMETER. From these the intermediate values for each difference of age were computed on the machine by a continuous process, and verified at each tenth interval.

(INTEREST $4\frac{1}{2}$ PER CENT.)

x	$y = x + 10$	$y = x$	$y = x - 10$	$y = x - 20$	$y = x - 30$	Diff.	The initial values of $D_{x,y}$ for each difference of Age.
18	553293935	955547375					
9	515989247	892599491					
20	479900577	832011815				-10	553293935
1	445179109	773975079				9	584672147
2	412665462	718734081				8	617753974
3	380485695	666430706				7	652629224
4	350914717	617179709				6	689392245
5	323124160	571035381				5	728142414
6	297308509	528008068	982954301			4	768984136
7	273265387	489053366	909863631			3	812027033
8	251028417	450945718	841934430			2	857386627
9	230326331	416267557	778790386			1	905184239
30	211195239	383878513	720092930				
1	193395888	353635712	665536724			+0	955547375
2	176850320	325942367	614820468			1	1008610215
3	161598495	299130897	567689592			2	1064513799
4	147459931	274831294	523935639			3	1123406227
5	134462491	252248787	483366156			4	1107787545
6	122445161	231428259	445782148	767349090		5	1090158423
7	111426538	212123971	411007369	708247999		6	1070762902
8	101330896	194356811	378854487	653556883		7	1049996098
9	920843095	177901431	349141937	602972437		8	1028195022
40	835563077	162772231	321520313	556191565		9	1005731545
1	757578649	148775824	295862550	512941949		10	982954301
2	695752643	135837600	272045311	472969837		1	960200299
3	620156440	123962882	250354247	436038744		2	937760065
4	560266871	112990248	229464563	401913221		3	915598736
5	505615788	102927513	210587756	370376287		4	893693070
6	453761962	936353188	193089836	341234552	587385618	5	872031446
7	410310037	851210517	176976033	314302384	541605945	6	850579000
8	368959419	773358011	162045917	289414830	499265708	7	829335734
9	331418899	702317459	148333236	266464802	460188927	8	808348130
50	297401010	637125153	135683572	245220201	424201527	9	787674295
1	266624944	577864622	124115445	225598136	391123336	20	767849090
2	238819341	523644046	118482983	207510284	360771171	1	747430623
3	213685646	474296073	108726250	191171718	332961301	2	727942134
4	190772896	429250983	948068975	175494656	307383509	3	708895244
5	169985574	388047238	865679865	161342756	283765458	4	690278333
6	151056549	350272490	789942444	148191530	261388826	5	672091401
7	133899391	315895403	719627327	136013623	241554776	6	654334447
8	118083467	283709474	654719850	124639765	222607252	7	637007472
9	103742943	254356305	594669719	114060089	204896758	8	620087233
60	905208452	227324730	539012333	104133989	188200807	9	603550489
1	784960971	202428605	487000038	948702559	172440690	30	587385618
2	675868116	179521030	438729879	861592380	157547215	1	571569379
3	577300642	158500489	393624394	779712530	143704206	2	556090150
4	488643423	139266947	351889588	703391025	130202938	3	541029278
5	410350325	121731265	318359367	631958702	117782523	4	526468111
6	340661819	105807520	277891118	565699141	106123961	5	512476375
7	279883076	914081811	245348273	504062771	952707064	6	499112176
8	227193749	784320421	215590263	447253741	851442049	7	486421997
9	181855248	667918481	188442243	394984680	757596803	8	474243144
70	143174494	563083269	163759840	347027268	670436122	9	462412922
1	111056883	470211073	141406934	302937486	590138699	40	450803500
2	842137848	388542540	121259751	262810069	516115185		
3	624909304	317241737	103202911	226286487	448240537		
4	451855232	255541939	871001463	193372493	386531687		
5	316503963	203195791	728313202	163875039	330490383		
6	215764922	158834844	602784481	137605120	280120856		
7	142968609	122114200	493331507	114394547	235021147		
8	922298721	921654850	398817860	940629671	195138748		
9	583811936	681276795	318174564	764451963	160233082		
80	356468115	491837983	250219539	613486719	130005391		
1	211348430	347219775	193432315	485765998	104066135		
2	124597735	237724229	147011674	379119079	821676697		
3	701543136	157973827	109690352	291327987	638776429		
4	326568539	101430211	801970638	220184647	488835620		
5	124544196	625369127	573627813	163488119	367858524		
6	3108877	371755358	401487467	119102081	271889150		
7		212693501	273666839	849992803	197097774		
8		117414766	181668528	593318822	139936884		
9		630037922	117414766	405057396	973198229		
90		323162125	735220009	270031818	662062343		
1		159194822	445883941	175359297	440379283		
2		77355037	261537738	110734190	285565378		
3		34860322	147588289	680937556	180867552		
4		12354059	78498644	398506570	109411772		
5		3299184	38370960	217002897	618474117		
6		511569	16566070	106354296	315502200		
7			6117272	45032155	139867175		
8			1824577	15584310	50897448		
9			382459	3821915	13194052		
			69617	812398	2983777		

NOTE.—The local value of the figures is not assigned in these columns.

$D_{x \cdot y}$ x BEING THE OLDER AGE. $4\frac{1}{2}$ PER CENT.

$y = x - n$

x	0	1	2	3	4	5	6	7	8	9	x
18	955547	1008610	1064514	1123406							18
9	892599	942283	994588	1049714	1107788						9
20	832012	878985	927267	978760	1033009	1090159					20
1	773975	817209	862767	919770	981346	104430					1
2	718734	758964	801360	846934	893106	942702	1004652	1049996			2
3	666431	703811	743206	784721	828468	874563	923128	974294	1028195		3
4	617180	651871	688444	726969	767577	810363	855456	902960	953008	1008732	4
5	571035	603902	637108	672843	710505	750189	792015	836082	882510	931425	5
6	528008	557817	589239	622360	657298	694058	732827	773611	816728	862083	6
7	488053	515668	544780	575468	607815	641907	677837	715601	755200	797643	7
8	450046	478920	509492	541906	576199	612489	650783	691088	733411	777743	8
9	416298	446157	476519	508436	541963	578180	616196	656022	697668	741143	9
30	883979	408178	429498	453845	479525	506596	535133	565212	596915	630327	30
1	853936	874435	896198	918223	940520	963189	986226	1009633	1031308	1052251	1
2	825942	844804	865053	886701	908648	931894	956440	981286	1006433	1031880	2
3	299131	317694	338078	359284	381315	398123	421701	444506	469600	496033	3
4	274631	291481	309569	327483	346244	365868	387441	409962	434317	457590	4
5	252240	267740	283959	301581	319532	337798	357419	379311	399564	421980	5
6	231124	245701	260790	276588	293152	310515	329628	348441	368120	388977	6
7	212124	225394	239295	253960	269376	285593	302649	320448	339063	358522	7
8	194357	206574	219496	233033	247344	262489	278526	294299	310644	327593	8
9	177901	189253	201149	213732	226914	240698	255084	270071	285668	301989	9
40	162772	173214	184266	195849	208101	220935	234503	247909	261143	274293	40
1	144773	154872	165638	176989	188935	199675	210998	222804	235093	247864	1
2	135638	144898	154275	164172	174697	185825	197235	209090	221392	234141	2
3	126963	132929	140089	149089	159177	170498	180965	191999	203540	215609	3
4	119900	126877	134793	143793	153912	164272	174905	185737	196799	208101	4
5	109227	109964	117425	125256	133564	142258	151343	160843	170743	181043	5
6	99435.3	100156	107003	114264	121983	129598	138227	147307	156706	166457	6
7	85121.1	91099.5	97443.6	104105	111169	118583	126438	134778	143518	152661	7
8	77335.8	82815.7	88632.2	94804.5	101286	108158	115371	123044	131193	139846	8
9	70231.7	75254.4	80686.8	86528.9	92262.9	98559.7	105247	112206	119531	127204	9
50	63712.6	68985.2	73254.4	78445.1	83954.6	89901.2	95940.3	102450	109282	116522	50
1	57786.5	62051.0	66582.4	71344.4	76399.4	81765.2	87459.4	93484.4	99778.5	106432	1
2	52364.4	56817.2	60473.4	64389.5	68530.1	72945.9	77664.4	82635.7	87912.7	93412.6	2
3	47429.6	51058.5	54907.2	58959.3	63264.8	67789.2	72592.7	77691.2	83101.6	88742.7	3
4	42925.1	46246.5	49779.8	53537.5	57498.5	61686.7	66099.2	70781.8	75753.2	81028.6	4
5	38404.4	41847.4	45465.4	49290.0	53219.4	57346.2	61678.0	66319.0	71270.9	76541.2	5
6	35027.2	37813.4	40777.3	43932.4	47289.0	50853.7	54612.0	58600.1	62919.9	67470.2	6
7	31659.5	34106.2	36818.1	39705.0	42777.2	46043.4	49521.3	53175.9	57059.1	61199.7	7
8	28370.9	30898.1	33173.0	35910.7	38918.7	42000.8	45253.7	48688.4	52321.0	56149.0	8
9	25435.6	27554.7	29812.9	32218.6	34780.4	37507.5	40409.7	43407.1	46500.5	50622.9	9
60	22733.5	24659.4	26713.8	28903.1	31235.4	33719.1	36363.0	39176.6	42169.8	45353.0	60
1	20242.9	21990.6	23854.7	25842.1	27959.9	30216.1	32618.7	35176.3	37899.1	40793.6	1
2	17953.1	19539.7	21219.1	23017.8	24935.4	26979.0	29156.0	31474.3	33942.2	36568.5	2
3	15850.0	17274.8	18795.8	20418.6	22149.5	23994.7	25951.2	28056.1	30266.9	32601.7	3
4	13928.7	15206.7	16573.6	18032.8	19599.8	21250.4	23020.7	24977.2	27051.2	29257.5	4
5	12173.1	13318.8	14542.9	15850.2	17245.7	18734.7	20322.8	22015.8	23820.1	25742.2	5
6	10580.8	11609.2	12694.1	13860.7	15106.7	16436.8	17855.9	19369.5	20983.2	22702.9	6
7	9140.82	10047.7	11017.6	12054.5	13162.4	14345.6	15609.6	16956.3	18391.6	19926.0	7
8	7843.20	8644.57	9502.18	10419.5	11400.1	12447.8	13566.8	14761.2	16035.7	17395.0	8
9	6679.18	7383.73	8138.14	8945.60	9809.05	10732.2	11718.6	12772.0	13896.5	15066.3	9
70	5630.83	6258.39	6916.83	7622.98	8379.24	9189.13	10052.8	10976.8	11969.5	13016.8	70
1	4703.11	5245.47	5828.21	6443.99	7101.23	7805.79	8559.31	9364.85	10225.6	11144.8	1
2	3883.43	4354.26	4857.43	5397.06	5980.35	6606.25	7278.84	7992.12	8747.06	9540.99	2
3	3172.43	3573.96	4005.21	4468.04	4964.41	5498.97	6084.60	6724.89	7429.73	8197.88	3
4	2555.43	2896.51	3283.13	3698.89	4149.45	4632.66	5149.77	5701.74	6297.64	6928.66	4
5	2031.96	2314.02	2622.90	2954.88	3311.43	3694.09	4104.49	4543.43	5010.64	5497.18	5
6	1589.35	1829.53	2098.67	2393.86	2715.79	2971.77	3315.18	3683.47	4072.01	4483.96	6
7	1211.14	1411.44	1620.43	1845.37	2091.68	2356.43	2640.77	2945.93	3273.20	3619.47	7
8	921.655	1073.76	1241.09	1424.85	1623.64	1839.23	2072.03	2322.05	2590.39	2873.15	8
9	681.277	801.265	933.500	1078.97	1238.73	1410.69	1598.98	1801.37	2018.73	2252.01	9
80	401.838	585.170	688.231	801.813	926.763	1063.99	1211.68	1373.42	1547.25	1733.95	80
1	347.220	417.000	498.131	583.511	679.810	785.747	902.091	1027.32	1164.44	1311.88	1
2	237.724	290.307	348.650	414.810	487.867	568.342	656.955	754.229	859.928	973.576	2
3	157.974	195.823	239.136	287.196	341.695	401.874	468.197	541.159	621.296	707.530	3
4	101.430	128.077	158.763	193.879	232.843	277.028	325.818	379.599	438.742	503.706	4
5	62.5369	80.8467	103.086	129.544	154.535	185.591	220.810	259.699	302.558	349.707	5
6	37.1753	48.9389	63.2975	79.8883	99.0245	120.923	145.237	173.797	203.230	234.770	6
7	21.2694	28.5240	37.5498	48.5437	61.2965	75.9924	92.7890	111.437	132.533	155.934	7
8	11.7415	16.0041	21.4629	28.2544	36.5288	46.1298	57.1730	69.8193	83.8593	99.7624	8
9	6.3003	8.6531	11.7946	15.8175	20.8226	26.9192	33.9910	42.1348	51.4547	61.7956	9
90	3.2316	4.5460	6.2436	8.5103	11.4131	15.0245	19.4234	24.5261	30.4023	37.1270	90
1	1.6919	2.3764	3.2024	4.3983	5.9950	8.0399	10.5839	13.6827	17.2772	21.4166	1
2	.7735	1.0700	1.5689	2.2068	3.0309	4.1313	5.5495	7.2936	9.4291	11.9033	2
3	.3486	.5100	.7233	1.0343	1.4550	1.9983	2.7238	3.6523	4.8057	6.2166	3
4	.1235	.1851	.2647	.3664	.4944	.6520	.8434	1.0711	1.3406	1.6584	4
5	.0829	.1189	.1620	.2156	.2836	.3698	.4781	.6114	.7736	.9684	5
6	.0661	.0920	.1217	.1583	.2044	.2628	.3354	.4241	.5306	.6584	6
7		.0620	.0835	.1083	.1384	.1753	.2201	.2741	.3384	.4143	7
8			.0605	.0783	.1004	.1283	.1631	.2061	.2584	.3203	8
9				.0604	.0754	.0954	.1211	.1534	.1934	.2413	9

$D_x \cdot y$ x BEING THE OLDER AGE, $4\frac{1}{2}$ PER CENT.

$y = x - n$

x	10	11	12	13	14	15	16	17	18	19	x
25	982954										25
6	909884	960200									6
7	841934	888600	937760								7
8	778790	822038	867600	915599							8
9	720093	760158	802370	846843	893693						9
30	665537	702639	741738	782922	826317	872031					30
1	614820	649164	685854	723466	762662	803689	850579				1
2	567690	599485	632951	668237	705417	744690	785859	829356			2
3	523936	553232	584295	616993	651326	687568	725747	765973	808348		3
4	483566	510534	539172	569851	601155	634068	668680	707185	748382	797674	4
5	447782	470893	497892	528299	561460	596843	634021	672693	712637	754837	5
6	417007	434211	453679	474471	496522	519828	544475	570441	597723	626326	6
7	378854	400391	422889	446711	471820	498285	526023	555075	585439	617104	7
8	349141	368942	389817	411894	435023	459247	484675	511408	539431	568748	8
9	321520	339972	359253	379580	401009	423598	447408	472503	498911	526623	9
40	295863	313049	331015	349787	369479	390148	412837	437590	464464	493505	40
1	272045	289046	304778	322269	340545	359681	380128	401441	424111	448489	1
2	250354	264841	280418	296708	313735	331628	350426	370083	390698	412880	2
3	229465	241704	257970	272970	288826	305402	322723	340983	360293	380654	3
4	210588	223345	237205	250931	265690	281124	297267	314115	331869	350625	4
5	193060	204048	217363	230852	244211	258374	273395	289296	306093	323800	5
6	176976	187891	199429	211510	224036	237035	251013	266228	282500	299747	6
7	162046	172183	182902	194028	205782	218152	231199	244707	259017	273889	7
8	148353	157657	167520	177861	188773	199209	210231	221898	234167	247008	8
9	135684	143441	152414	163011	173655	183693	194231	205310	216884	228170	9
50	124115	132078	140505	149387	158679	168465	178811	189643	201113	213067	50
1	113483	120879	128838	136941	145442	154441	164047	174411	185407	196907	1
2	103728	110598	117805	125382	133362	141744	150613	159990	169720	180001	2
3	94806 9	101129	107829	114866	122224	130023	138198	146841	155908	165470	3
4	86568 0	92441 9	98606 5	105139	111991	119175	126779	134748	143178	152098	4
5	78994 2	84194 6	90121 0	96390 8	102949	109719	116838	124306	132136	140366	5
6	71962 7	76974 2	82236 4	87816 4	93672 6	99877 9	106387	113213	120459	128106	6
7	65472 0	70070 4	74950 0	80073 9	85507 2	91209 8	97251 5	103649	110425	117609	7
8	59467 0	63680 7	68153 3	72899 4	77883 1	83167 7	88713 9	94590 7	100755	107219	8
9	53901 2	57758 0	61848 5	66192 4	70800 2	75648 3	80774 9	86161 4	91869 2	97856 4	9
60	48700 0	52258 4	55993 5	59881 1	64172 5	68641 4	73334 0	78310 0	83532 1	89065 7	60
1	43873 0	47110 8	50551 1	54168 3	58004 4	62078 3	66401 4	70940 9	75754 4	80866 3	1
2	39362 4	42333 8	45458 0	48777 6	52266 0	55999 4	59900 4	64071 8	68462 0	73096 7	2
3	35189 0	37877 5	40736 7	43743 0	46937 4	50294 2	53857 9	57640 6	61654 7	65906 6	3
4	31335 9	33700 6	36339 9	39083 1	41967 4	45028 2	48252 6	51671 7	55300 9	59152 0	4
5	27789 1	29868 1	32236 9	34753 6	37477 1	40313 5	43269 9	46346 3	49541 2	52866 9	5
6	24534 3	26385 8	28533 4	30773 5	33123 5	35623 9	38252 9	41046 4	43991 9	47099 3	6
7	21559 0	23209 7	25151 2	27123 4	29222 0	31454 7	33829 1	36325 6	38978 4	41768 9	7
8	18844 2	20388 6	22033 3	23785 8	25650 9	27635 6	29747 0	31992 3	34353 5	36846 3	8
9	16376 0	17740 3	19194 2	20743 0	22392 3	24148 1	26016 0	28004 3	30118 3	32341 0	9
70	14140 7	15339 4	16617 3	17979 1	19429 9	20974 9	22619 5	24369 7	26211 6	28121 8	70
1	13126 0	14172 9	15289 6	16480 0	17748 9	19090 2	20519 8	21971 5	23490 4	24996 5	1
2	10320 3	11228 0	12198 4	13232 5	14334 9	15507 7	16761 3	18093 9	19512 7	21022 5	2
3	8710 01	9492 98	10328 8	11220 6	12171 7	13186 7	14266 4	15417 5	16643 5	17948 5	3
4	7283 13	7952 51	8667 38	9430 49	10244 7	11113 1	12039 0	13025 6	14076 7	15196 0	4
5	6027 84	6695 14	7201 28	7848 62	8539 65	9276 96	10063 3	10901 7	11795 2	12747 0	5
6	4933 32	5409 55	5918 65	6462 62	7043 66	7663 71	8325 39	9031 12	9783 60	10565 3	6
7	3988 18	4383 84	4807 03	5259 43	5742 81	6259 04	6810 11	7398 10	8025 23	8693 80	7
8	3181 75	3504 83	3854 74	4228 85	4624 65	5049 39	5503 62	5998 18	6505 20	7056 63	8
9	2502 20	2766 13	3048 76	3351 23	3674 73	4020 66	4390 08	4784 73	5205 98	5655 47	9
80	1934 33	2149 21	2375 92	2618 67	2878 47	3158 34	3453 39	3770 73	4109 74	4471 58	80
1	1470 13	1640 40	1822 19	2014 40	2220 23	2440 48	2676 07	2927 92	3197 02	3484 41	1
2	1096 80	1229 15	1371 19	1523 62	1684 22	1854 22	1940 46	2237 44	2449 01	2683 00	2
3	801 971	903 477	1013 50	1129 50	1254 98	1387 35	1529 10	1690 80	1845 06	2011 51	3
4	573 628	650 195	732 491	820 877	915 735	1017 47	1124 79	1239 72	1362 71	1494 25	4
5	401 487	457 220	518 249	583 845	654 295	729 903	810 991	898 536	994 138	1094 17	5
6	273 667	314 188	357 802	405 561	456 894	512 025	571 193	634 649	701 694	771 278	6
7	181 689	209 979	241 070	274 534	311 178	350 565	392 866	439 264	490 562	538 317	7
8	117 383	136 697	157 999	181 393	206 673	234 146	263 763	295 612	329 772	366 408	8
9	73 5220	86 4708	100 741	116 440	133 681	152 238	172 559	194 400	217 657	243 033	9
90	44 5884	53 0406	62 8928	72 6897	84 0171	96 4574	109 847	124 509	140 269	157 194	90
1	26 1539	31 4099	37 3708	43 9520	51 2056	59 1851	67 9486	77 3809	87 7096	98 6111	1
2	14 7598	18 0234	21 6455	25 7530	30 2887	35 2973	40 7863	46 3254	53 3255	60 4433	2
3	7 3498	9 7305	11 8828	14 2710	16 9791	19 9695	23 2651	26 8906	30 8723	35 1578	3
4	3 8371	4 8451	6 0059	7 3344	8 8084	10 4799	12 3257	14 3598	16 5976	19 0561	4
5	1 8566	2 1416	2 7042	3 3521	4 0936	4 9163	5 8402	6 8794	8 0147	9 2697	5
6	8117	8052	1 0410	1 3145	1 6295	1 9899	2 3894	2 8433	3 3441	3 8960	6
7	1824	2446	3221	4184	5258	6518	7959	9569	11373	13376	7
8	0382	0521	0699	0920	1189	1502	1863	2274	2731	3240	8
9	0069	0095	0130	0174	0230	0297	0375	0465	0568	0682	9

$D_x y$ x BEING THE OLDER AGE. $4\frac{1}{2}$ PER CENT.

$y = x - n$

x	20	21	22	23	24	25	26	27	28	29	x
35	767340										35
6	708248	747431									6
7	653557	689781	727942								7
8	602972	639458	671733	708895							8
9	556192	587137	615742	654092	690278						9
40	512942	541537	571688	603413	636858	672091					40
1	472970	499390	527230	556564	587471	620032	654334				1
2	436939	460445	486106	513269	541826	571914	603614	637007			2
3	401913	424457	448215	473252	499635	527434	556723	587580	620087		3
4	370376	391195	413137	436262	460631	486311	513368	541876	571911	603650	4
5	341235	360457	380717	402078	424577	448294	473296	499619	527363	556593	5
6	314302	332046	350751	370496	391246	413145	436225	460542	486166	513163	6
7	289415	305790	323054	341253	360433	380650	401956	424409	449069	475999	7
8	266465	281576	297569	314394	332099	350671	370341	391070	412915	435934	8
9	245220	259293	273998	289501	305845	323074	341235	360373	380545	401802	9
50	225598	239703	254202	269116	284359	299971	314498	332165	350796	370431	50
1	207510	219715	232478	245820	259767	274459	289953	306286	323503	341648	1
2	191173	202234	214129	226867	239570	253156	267480	282581	298499	315277	2
3	176465	186385	197171	207877	219565	232295	246118	260783	276506	293225	3
4	163345	171117	181796	192252	203560	215834	229174	243601	259227	266833	4
5	149192	157129	166891	177173	187426	198649	210949	224327	238791	247894	5
6	136114	144462	153270	162545	172342	182633	193374	204607	216350	228619	6
7	124460	133437	142805	152599	162860	173630	184959	196889	209456	210660	7
8	114060	121230	128814	136758	145105	153905	163205	173055	183518	189776	8
9	104134	110778	117742	125107	132823	140930	149520	158799	168768	177868	9
60	948703	100950	107398	114149	121390	129170	136678	144958	153953	162862	60
1	861593	917743	976917	103983	110424	117332	124668	132217	140227	148992	1
2	779713	831385	885546	942354	100248	106550	113215	120197	127579	135308	2
3	703891	750297	800001	852138	906803	964063	102350	108544	115063	122796	3
4	631985	674439	719841	767527	817548	869995	925506	984081	104522	110968	4
5	565899	604373	645381	688419	734024	781861	832018	885106	940741	999593	5
6	504063	539185	576902	615110	654819	696955	741518	789593	843550	898611	6
7	447254	478668	513000	549003	586411	623071	661347	701363	743039	788107	7
8	394905	422973	452080	484204	517306	552407	589245	628290	669225	712157	8
9	347087	371845	399193	428180	458838	491001	524005	558472	594718	632002	9
70	302037	325060	349307	372998	399194	426993	456173	487126	519610	554082	70
1	282810	292205	302814	324469	347461	371864	397761	424054	452789	484049	1
2	268296	274368	281328	290132	299486	309406	321757	344355	368336	393517	2
3	253373	261477	270859	280879	291490	302733	314630	328203	343481	360599	3
4	243875	252855	262494	272890	283944	295668	308073	321180	335003	350671	4
5	237605	247395	257897	269104	280928	293370	306451	320192	334623	350873	5
6	234305	244905	256104	267913	280332	293370	307047	321384	336423	352958	6
7	230480	241880	253679	265752	278488	291897	305990	320787	336204	352423	7
8	226145	238145	250344	262817	275864	289590	303917	318854	334023	349473	8
9	221300	233700	246399	259482	273049	287200	301945	317304	333397	349273	9
80	485766	528943	570842	617628	667464	720536	777034	837157	901118	969140	80
1	379119	411852	446764	483984	523640	565903	610900	658801	709776	764005	1
2	291328	316978	344306	373535	404654	437717	472781	510787	550617	593428	2
3	220185	239978	261106	283850	307644	333328	360646	389748	420738	453728	3
4	163488	178514	194561	211691	229968	249403	270145	292203	315687	341112	4
5	119102	130911	143288	156288	169873	184100	198938	215403	233607	253663	5
6	849998	932040	101976	111349	121358	132043	143444	155603	168566	182381	6
7	609319	652181	718138	782442	854354	931154	101314	110061	119391	129337	7
8	405057	440443	480734	526107	576549	632149	692900	759835	828156	898358	8
9	270039	298515	329016	361658	396569	433891	473769	516267	561819	610327	9
90	175359	194841	215393	237400	260953	286143	313073	341846	372576	405379	90
1	110794	128530	137254	151733	167234	183825	201571	220541	240811	262458	1
2	640939	783103	851285	945957	104563	115246	126680	138909	151983	165960	2
3	395307	418946	503118	581257	633609	693939	752626	835207	915833	100202	3
4	217003	246968	277101	310537	346423	384907	425308	468984	515510	565275	4
5	106394	121118	137326	154661	173323	193352	214833	237868	263483	291772	5
6	45033	51700	58876	66735	75382	84824	95069	106223	118403	131724	6
7	15544	18019	20830	23950	27394	31164	35270	39731	44560	49779	7
8	3821	4453	5148	5908	6738	7638	8598	9629	10741	11935	8
9	0812	0955	1113	1286	1477	1633	1906	2148	2407	2685	9

$D_{x \cdot y}$ x BEING THE OLDER AGE. $\frac{4}{3}$ PER CENT.

$$y = x - n$$

x	30	31	32	33	34	35	36	37	38	39	x
45	587386										45
6	541006	571569									6
7	499266	526938	556090								7
8	460189	485744	512667	541029							8
9	424202	447803	472671	498869	526468						9
50	391123	412928	435903	460109	485611	512476					50
1	360771	380924	402159	424535	448110	472947					1
2	332961	351599	371239	391934	413741	436717	460923				2
3	307384	324626	342795	361944	382121	403382	425783	449382			3
4	283765	299716	316527	334244	352915	372569	393199	414810	437423		4
5	261890	276641	292191	308590	325862	344054	363235	383445	404738	427171	5
6	241555	255192	269567	284719	300669	317520	335258	353946	373639	394386	6
7	222607	235203	248481	262478	277232	292782	309170	326440	344639	363814	7
8	204957	216517	228768	241683	255297	269647	284782	300711	317609	335299	8
9	188201	199002	210287	222186	234729	247952	261889	276578	292059	308374	9
60	172441	182458	192929	203870	215406	227566	240385	253897	268139	283147	60
1	157547	166813	176504	186653	197217	208376	220140	232541	245612	259399	1
2	144704	152020	160061	170811	180085	190298	201068	212417	224368	236995	2
3	132023	138283	146235	154889	163986	173291	183119	193440	204403	215917	3
4	117782	124918	132670	140947	149601	157234	166257	175686	185427	195496	4
5	106124	112641	119455	126678	134220	142115	150370	159000	168017	177424	5
6	95270.7	101146	107358	113961	120927	128295	135440	143317	151542	160196	6
7	85144.2	90470.6	96050.2	101949	108125	114635	121480	128625	136096	143907	7
8	76759.7	80521.8	85559.0	90885.7	96414.0	102255	108600	114445	121042	127508	8
9	67043.6	71321.4	75804.5	80546.7	85514.2	90765.7	96264.3	102238	108154	114515	9
70	59013.9	62799.7	66806.7	71006.0	75448.0	80101.1	85020.1	90170.6	95766.3	101909	70
1	51611.5	54975.1	58501.8	62234.6	66146.5	70284.5	74619.1	79201.5	83999.5	89212.3	1
2	44824.1	47793.4	50908.2	54174.0	57630.6	61253.2	65085.0	69099.0	73342.4	77785.5	2
3	38653.2	41230.8	43963.1	46827.2	49831.2	53010.7	56342.9	59867.6	63599.8	67493.0	3
4	33049.0	35291.5	37645.0	40138.8	42754.7	45497.4	48400.4	51442.8	54660.9	58032.0	4
5	28012.1	29927.1	31957.7	34088.9	36347.1	38715.9	41199.6	43823.3	46543.3	49407.4	5
6	23502.1	25135.8	26857.4	28679.7	30592.3	32618.9	34744.7	36973.6	39332.7	41805.1	6
7	19513.9	20834.4	22333.8	23966.0	25745.4	27684.9	29795.7	32044.8	34455.4	37019.8	7
8	16023.8	17152.7	18363.8	19642.7	20985.5	22499.5	23999.8	25587.4	27248.4	29090.0	8
9	13000.5	13930.3	14917.8	15965.1	17076.9	18244.8	19462.2	20781.4	22158.1	23692.2	9
80	10406.6	11166.6	11965.2	12813.0	13712.9	14667.9	15670.6	16733.9	17848.8	19032.3	80
1	8216.77	8823.16	9467.48	10144.6	10863.4	11628.4	12436.0	13289.2	14187.7	15133.6	1
2	6987.76	7376.95	7796.95	8244.6	8715.66	9211.76	9720.68	10241.6	10784.6	11348.2	2
3	4893.96	5261.84	5659.03	6076.66	6520.42	6996.73	7491.80	8007.23	8544.90	9105.43	3
4	3678.59	3993.22	4298.01	4588.04	4828.63	5096.41	5386.86	5695.84	6021.89	6363.97	4
5	2718.89	2932.08	3153.95	3400.30	3556.98	3726.86	3909.01	4103.63	4314.96	4544.89	5
6	1970.93	2127.70	2294.53	2472.07	2660.94	2861.61	3073.01	3297.42	3533.23	3783.69	6
7	1399.37	1512.29	1632.54	1760.54	1896.77	2041.68	2195.80	2357.85	2530.04	2710.87	7
8	974.193	1052.98	1137.92	1228.40	1324.73	1427.22	1536.27	1651.23	1774.17	1903.78	8
9	662.062	717.219	775.998	838.615	905.297	976.281	1051.82	1132.18	1217.65	1307.61	9
90	440.379	477.709	517.507	559.919	605.100	653.214	704.432	759.939	816.923	878.690	90
1	285.585	310.221	336.513	364.553	394.430	426.253	460.151	496.211	534.623	575.474	1
2	180.863	198.792	218.783	241.905	251.225	271.614	293.747	317.104	341.969	368.423	2
3	109.412	119.247	129.746	140.943	152.868	165.434	178.208	191.609	205.969	221.402	3
4	61.8474	67.5317	73.6023	80.0325	86.9968	94.3718	102.1233	110.2112	118.537	129.042	4
5	31.5502	34.5195	37.6921	41.0803	44.6973	48.5564	52.6724	57.0495	61.7369	66.7146	5
6	13.9967	15.3369	16.7803	18.3325	19.9998	21.7278	23.6039	25.6048	27.7377	30.0110	6
7	5.0897	5.5946	6.1347	6.7121	7.3290	7.9878	8.6911	9.4415	10.2416	11.0951	7
8	1.3194	1.4542	1.5984	1.7527	1.9177	2.0940	2.2822	2.4831	2.6975	2.9262	8
9	.2938	.3298	.3635	.3996	.4331	.4734	.5235	.5765	.6347	.6983	9

NOTE.—The summation of the values on this page is not given, but may easily be made if required in any extreme case.

EXTENDED VALUES OF $D_{\frac{x}{y}}$, FORMED BY ACTUAL MULTIPLICATION OF THE FACTORS d_x AND B_y ON THE ARITHMOMETER. From these the intermediate values for each difference of age were computed on the machine by a continuous process, and verified at each tenth interval.

$$B_y = l_y + \frac{1}{2} v y + \frac{1}{2} a_w + \frac{1}{2}$$

(INTEREST $4\frac{1}{2}$ PER CENT.)

x	$y = x + 10$	$y = x$	$y = x - 10$	$y = x - 20$	$y = x - 30$	Dif.	The initial values of $D_{\frac{x}{y}}$ for each difference of Age.
18	936995203	133252990					
9	101230898	146409808				-10	936995203
20	106315655	156685146				9	980629655
1	108321196	163011984				8	1024567353
2	108442501	166043160				7	1068617531
3	106341896	165646686				6	1111444669
4	102512624	162085681				5	1151728636
5	971025634	155681036	229084434			4	1189562935
6	906004847	147205324	210325891			3	1226010670
7	843589597	139141425	196309879			2	1261742576
8	784658130	131416366	186891284			1	1297131064
9	727691545	124386549	179899725			+0	1332529900
30	673834987	117590593	173301845			1	1383536851
1	621490350	110806461	166752046			2	1463894342
2	570632393	104396139	159847519			3	1572469248
3	521026297	978697441	152449795			4	1774877864
4	474262880	914768259	144636661			5	1952716648
5	428994815	850019375	136280539	200536629		6	2090775704
6	386992100	786830724	127842221	182660031		7	2194904992
7	848314167	725035842	119587203	168721495		8	2261594536
8	313380549	666855345	111686482	158832805		9	2293184320
9	281704711	610964200	104433985	151042419			
40	253512252	557757237	973339255	143448114		10	2290844336
1	227609604	506915816	903787930	136010559		1	2259254552
2	204279314	460044720	841643290	128869318		2	2231174744
3	183149947	416762463	782847925	121942697		3	2205434920
4	163985713	377186773	727525814	115031215		4	2180865088
5	146782040	340642907	674957042	108213427	159235911	5	2159805232
6	131114237	307378341	624960361	101541943	145082386	6	2138745376
7	116054684	275421086	573304729	945607167	133412482	7	2113005552
8	101637878	245109755	521579118	873552820	124230653	8	2081415768
9	860551890	216723524	470032522	803441011	116201324	9	2046316008
50	755364700	190797834	419778025	732552449	107961604	20	2005366288
1	641687516	166699992	371262289	661929188	996133669	1	1962076584
2	548804756	147036569	331191089	605798192	927575861	2	1917616888
3	473588066	131023645	298147707	560041594	872365887	3	1874327184
4	411565228	117726229	270891148	522500566	826140792	4	1831037480
5	360753726	106985881	248286380	491959872	788741511	5	1787747776
6	317975282	978435073	229379933	466374323	757752939	6	1744458072
7	282232884	901752056	214003884	445461313	734742606	7	1703508352
8	251984422	835490937	201496870	428752188	718084121	8	1664898616
9	225146173	775968069	190983194	414206400	708015708	9	1627458872
60	201891666	722522757	182502276	401526807	700702343		
1	179811232	672244064	174638086	388941444	693449625	30	1592359112
2	159457117	621594699	166538557	375050194	686147380	1	1558429344
3	139586158	571748264	158180805	359944530	676120942	2	1516309632
4	121329607	522387090	149485179	343833809	663193972	3	1465999976
5	104132568	473852928	140526817	326126163	646193259	4	1408670368
6	884071948	426739463	131311105	307839870	625898740	5	1345490800
7	742091942	382637674	122233521	290084708	603827897	6	1277631264
8	615062016	340790583	112924066	272496320	579856114	7	1226151616
9	504247385	300690036	103633059	255064265	553186116	8	1191051856
70	406183790	263259446	942563778	238082515	523809971	40	1160632064
1	321959727	227121704	849119469	220587443	491276562		
2	247934485	194787543	759319557	203438001	458148931		
3	189065599	164345948	673164962	186238913	423791485		
4	138145757	137309137	591187282	169172896	389117915		
5	992149036	112763663	513128535	152174473	358157342		
6	694605312	911243575	439855144	135346904	317301215		
7	465389310	719802000	371144527	118562038	281371541		
8	302857254	556337502	308252788	102205687	246479083		
9	199609364	420977175	251034800	865193427	212943561		
80	119080619	310229705	201067842	719895402	181838631		
1	762690028	223032309	157334828	588213556	152808326		
2	438165990	153890370	120902616	471301794	126271863		
3	233518460	104005678	904073079	370310511	102450708		
4	914729196	666180234	662145805	285088222	815802398		
5	348188241	415563068	472312720	214924851	637385640		
6	63788670	250057912	328047687	158347852	487248854		
7		142007010	219637468	113249539	361775403		
8		776372167	142616677	790203576	262003469		
9		425203380	896756112	534748687	184301558		
90		209694886	546298659	354070196	126769902		
1		108955718	318617585	224764039	840305080		
2		525799188	184668444	145083139	565562153		
3		234691920	104528320	908616160	372171368		
4		753461910	548732274	545409117	234827004		
5		217985870	260166388	295694935	134555321		
6		27061860	106085175	139171746	671778765		
7			35150250	54365710	280320640		

NOTE.—The local value of the figures is not assigned in these columns.

D. 2. x BEING THE YOUNGER AGE. ($\frac{1}{2}$ PER CENT.)

x	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	x
18	93700	98063	102467	106862	111144	115173	118856	122601	126174	129713	18
9	101231	106761	110886	115645	120017	124511	129098	134268	138382	142415	9
20	106316	111374	116357	121776	127232	132703	138021	143023	147728	152244	20
1	108321	113832	119248	124654	130086	135482	140785	145779	150518	155100	1
2	108443	113716	119502	125187	130789	136389	141911	147358	152690	157902	2
3	106342	111737	117171	123133	128908	134689	140488	146225	151918	157465	3
4	102513	107827	113298	118908	124659	130452	136288	142078	147823	153524	4
5	97103	102403	107717	113182	118687	124232	129818	135446	141118	146834	5
6	90600	95764	100996	106232	111622	117050	122518	128026	133574	139162	6
7	84359	89474	94573	99741	104912	110234	115595	121006	126468	131980	7
8	78466	83366	88442	93482	98590	103701	108963	114263	119702	125280	8
9	72769	77592	82457	87457	92441	97492	102546	107740	112989	118373	9
30	67383	72066	76842	81681	86612	91548	96550	101556	106708	111908	30
1	62149	66726	71364	76093	80864	85708	90656	95600	100650	105904	1
2	57063	61401	65923	70505	75177	79891	84738	89564	94458	99455	2
3	52103	56210	60483	64938	69451	74053	78697	83449	88225	93046	3
4	47426	51224	55262	59463	63843	68402	72980	77806	82681	87618	4
5	42890	46477	50199	54156	58237	62565	66918	71348	75821	80419	5
6	38699	41973	45474	49146	52987	57015	61218	65499	69899	74415	6
7	34831	37822	41022	44444	48098	51787	55723	59827	63985	68226	7
8	31338	34045	36968	40096	43440	46919	50618	54465	58477	62541	8
9	28170	30614	33259	36115	39170	42437	45835	49448	53207	57128	9
40	23351	27504	29890	32472	35261	38244	41434	44751	48279	51950	40
1	22781	24737	26838	29167	31826	34707	37818	40450	43494	47110	1
2	20428	22227	24157	26208	28482	30943	33509	36442	39481	42645	2
3	18315	19965	21723	23609	25614	27836	30241	32838	35516	38466	3
4	16399	17903	19516	21234	23078	25038	27211	29561	32090	34815	4
5	14678	16045	17517	19095	20776	22561	24409	26424	28623	31007	5
6	13111	14365	15703	17144	18688	20334	22099	23976	26056	28307	6
7	11605	12767	13977	15279	16680	18183	19784	21503	23324	25352	7
8	10164	11220	12334	13513	14772	16127	17580	19128	20789	22554	8
9	8805.5	9766.3	10782	11851	12995	14194	15496	16892	18380	19976	9
50	7553.6	8410.6	9328.3	10298	11320	12403	13557	14801	16135	17555	50
1	6419.9	7172.7	7985.4	8857.8	9792.7	10749	11727	12847	14053	15321	1
2	5488.0	6168.3	6883.7	7664.6	8500.9	9384.7	10316	11303	12355	13488	2
3	4736.9	5330.9	5953.0	6628.0	7448.2	8327.8	9267.0	10261	11319	12451	3
4	4115.7	4647.5	5231.4	5870.4	6561.8	7306.2	8103.5	8945.9	9833.6	10774	4
5	3607.5	4036.9	4614.0	5194.8	5829.2	6515.8	7255.0	8046.7	8883.2	9764.7	5
6	3170.8	3614.8	4095.1	4624.2	5205.3	5841.0	6529.9	7269.7	8063.9	8901.1	6
7	2822.8	3221.3	3662.1	4148.6	4684.7	5273.3	5917.4	6614.4	7364.7	8164.3	7
8	2519.8	2887.3	3294.9	3746.7	4249.4	4791.7	5389.8	6062.5	6795.4	7533.0	8
9	2251.5	2595.7	2974.2	3394.1	3858.5	4371.1	4935.9	5556.1	6234.7	6969.1	9
60	2018.0	2334.2	2691.1	3083.5	3518.6	4000.3	4531.7	5117.4	5760.4	6463.9	60
1	1798.1	2098.7	2427.6	2798.7	3206.9	3657.6	4160.3	4713.0	5322.1	5990.8	1
2	1594.6	1865.7	2177.6	2518.8	2903.9	3327.4	3797.1	4316.7	4890.2	5522.1	2
3	1395.9	1651.0	1931.7	2254.7	2608.0	3006.7	3445.1	3931.5	4469.4	5068.2	3
4	1213.8	1444.2	1703.4	1993.0	2326.2	2690.7	3102.1	3554.4	4056.3	4611.2	4
5	1041.3	1246.3	1479.9	1750.4	2048.0	2380.4	2755.0	3187.7	3682.3	4249.2	5
6	884.07	1066.1	1276.4	1515.1	1792.0	2106.7	2465.0	2877.3	3350.8	3897.5	6
7	742.09	904.62	1080.9	1290.1	1550.3	1853.7	2195.5	2580.8	2994.6	3539.4	7
8	615.06	757.31	923.17	1113.3	1339.9	1612.1	1921.3	2269.5	2658.6	3080.0	8
9	504.25	625.66	770.36	939.08	1132.4	1355.7	1609.4	1903.5	2227.2	2590.6	9
70	406.19	510.65	633.61	780.15	951.01	1146.8	1373.1	1629.8	1927.7	2255.5	70
1	321.96	409.02	514.21	638.02	785.58	957.63	1154.8	1382.7	1641.2	1941.1	1
2	247.93	323.07	410.43	515.99	640.23	788.30	960.95	1159.8	1387.4	1640.9	2
3	189.07	247.43	322.41	409.58	514.92	638.91	786.67	959.06	1156.4	1384.6	3
4	138.15	187.50	245.37	319.73	408.19	510.65	633.61	780.15	951.01	1146.8	4
5	99.215	135.84	184.36	241.27	314.38	399.39	502.11	623.01	767.10	935.10	5
6	69.461	96.683	132.37	179.66	235.11	306.36	389.20	490.30	607.11	747.53	6
7	46.539	66.884	93.007	127.46	173.99	226.39	295.00	374.77	471.15	584.60	7
8	30.286	44.289	63.651	89.597	121.30	164.63	215.45	280.74	356.65	448.39	8
9	19.961	28.435	41.583	59.761	83.183	113.69	154.57	202.28	268.53	334.86	9
80	11.908	18.433	26.544	38.525	55.366	77.066	105.51	143.20	187.40	244.20	80
1	7.6269	10.876	15.690	24.060	35.185	50.567	70.366	96.365	130.79	171.16	1
2	4.9317	6.874	9.7785	15.186	21.633	31.635	45.465	63.284	86.642	117.59	2
3	2.3352	3.8753	6.0649	8.6486	13.431	19.133	27.960	40.211	55.971	76.630	3
4	.9147	2.0301	3.8690	5.2725	7.5186	11.676	16.633	24.324	34.959	49.665	4
5	.3481	.7812	1.7338	2.8773	4.5030	6.4212	9.9720	14.205	20.774	29.855	5
6	.0637	.2916	.6543	1.4522	2.4099	3.7715	5.3782	8.3522	11.898	17.399	6
7		.0520	.2380	.5340	1.1852	1.9669	3.0782	4.3805	6.8168	9.7107	7
8			.0416	.1903	.4289	.8475	1.5725	2.4610	3.5094	5.4590	8
9				.0324	.1484	.3351	.7392	1.2269	1.9201	2.7380	9
90					.0248	.1137	.2551	.5661	.9396	1.4705	90
1						.0184	.0842	.1890	.3195	.4892	1
2							.0139	.0656	.1427	.2189	2
3								.0108	.0471	.0733	3
4									.0073	.0335	4
5										.0047	5

D₂ x BEING THE OLDER AGE. (4½ PER CENT.)

x	0	1	2	3	4	5	6	7	8	9	x
18	133253	138354	144380	151247							
9	146410	150405	156163	162833	177488						
20	158685	161090	165478	171810	181780	195273					
1	168012	172763	178468	185175	193957	204811	209078				
2	168043	171131	176118	181058	185999	193119	204335	219400			
3	165447	171098	176350	181499	186559	191650	198986	210544	226159		
4	162086	167960	173478	178793	184004	189165	194327	201766	213445	229318	24
5	155991	161920	167980	173301	178911	184816	188973	194129	201560	213267	5
6	147205	153534	159987	165475	170911	176149	181282	186366	191452	198780	6
7	139141	145376	151628	157703	163419	168787	173959	179029	184050	189073	7
8	131416	137536	143669	149877	155888	161593	166940	171952	176963	181926	8
9	124387	129952	136004	142098	148207	154157	159734	164981	170036	174992	9
30	117591	123185	129497	134991	140728	146776	152658	158191	163388	168394	30
1	110908	116444	121984	127433	133777	139553	145345	151170	156949	161795	1
2	104396	109473	115043	120516	125990	131772	137678	143595	149350	154764	2
3	97870	102935	107836	113323	118714	124202	129802	135618	141449	147118	3
4	91477	96219	101101	106018	111412	116712	121935	127613	133331	139063	4
5	85002	89644	94294	99078	103896	108182	114377	119485	125059	130663	5
6	78683	83197	87711	92258	96939	101653	106225	110915	116915	122360	6
7	72504	76900	81282	85724	90168	94743	99350	104485	106373	112466	7
8	66686	70897	75184	79448	83788	88132	92604	97107	102049	106903	8
9	61090	65146	69230	73428	77613	81853	86097	90465	94864	99691	9
40	55778	59652	63905	67598	71692	75778	79818	84061	88326	92622	40
1	50892	54425	58208	62065	65937	69856	73943	77983	82026	86188	1
2	46004	49592	53448	56941	60608	64408	68314	72207	76132	80100	2
3	41678	44682	48380	51943	55558	59234	62946	66765	70570	74426	3
4	37719	40739	43951	47292	50758	54304	57992	61533	65264	68983	4
5	34064	36905	39860	43003	46272	49690	53132	56554	60208	63853	5
6	30738	33398	36119	39011	42087	45286	48621	52000	55446	58923	6
7	27543	29907	32497	35143	37957	40949	44082	47307	50595	53948	7
8	24611	26628	28915	31361	33977	36697	39590	42600	45738	48916	8
9	21673	23552	25587	27784	30135	32648	35262	38043	40934	43940	9
50	16980	20700	22406	24430	26538	28783	31184	33691	36336	39068	50
1	16670	18117	19656	21302	23077	24998	27061	29111	31292	34503	1
2	14704	15998	17387	18864	20601	22372	24184	26230	28418	30693	2
3	13102	14283	15540	16890	18324	19914	21634	23492	25479	27604	3
4	11777	12855	14016	15258	16591	18018	19542	21230	23033	25004	4
5	10680	11695	12798	13918	15143	16468	17856	19405	21082	22892	5
6	9784.4	10720	11718	12793	13946	15174	16492	17992	19444	21029	6
7	9017.6	9912.3	10860	11873	12961	14123	15372	16707	18126	19699	7
8	8354.9	9223.5	10139	11108	12143	13257	14451	15724	17089	18540	8
9	7759.7	8606.4	9501.1	10444	11443	12508	13656	14888	16197	17603	9
60	7225.2	8044.9	8922.7	9850.3	10828	11863	12969	14158	15433	16792	60
1	6722.4	7514.2	8368.7	9279.6	10244	11261	12338	13497	14724	16051	1
2	6215.9	6975.1	7798.7	8681.2	9628.4	10629	11684	12802	13994	15278	2
3	5717.5	6435.9	7221.9	8072.5	8988.4	9969.1	11005	12098	13255	14499	3
4	5232.9	5998.9	6840.1	7745.1	8728.7	9793.6	10828	11955	12481	13675	4
5	4798.5	5598.1	6461.7	7423.4	8468.8	9595.6	10796	11599	11693	12826	5
6	4267.4	4951.3	5749.8	6626.0	7688.7	8933.9	9762.3	9756.3	10821	11946	6
7	3820.4	4506.6	5294.0	6230.5	7350.2	8648.1	9021.1	8065.9	9983.0	11072	7
8	3407.9	4094.9	4850.1	5685.3	6738.8	8080.4	7294.7	8185.6	9149.8	10188	8
9	3006.9	3696.6	4502.1	5432.9	6513.1	7837.7	6592.1	7420.4	8326.7	9307.4	9
70	2632.6	3045.1	3510.7	4022.6	4590.5	5218.6	5911.9	6675.8	7514.6	8432.4	70
1	2271.3	2650.9	3066.3	3535.1	4050.6	4623.5	5254.9	5953.1	6722.3	7587.0	1
2	1947.9	2279.1	2660.1	3076.9	3547.4	4064.6	4638.5	5273.1	5973.7	6745.6	2
3	1648.5	1943.8	2274.4	2654.6	3070.6	3540.0	4056.2	4628.9	5262.2	5961.3	3
4	1373.1	1629.8	1927.7	2255.6	2632.6	3045.1	3510.7	4022.6	4590.5	5218.6	4
5	1127.6	1350.1	1602.5	1895.5	2217.8	2598.6	2994.2	3451.9	3955.3	4513.7	5
6	911.24	1098.9	1315.6	1561.7	1847.1	2161.3	2522.5	2917.8	3363.9	3854.4	6
7	719.80	877.44	1058.1	1266.8	1503.8	1778.6	2081.0	2429.0	2809.6	3239.1	7
8	556.34	685.01	835.03	1007.0	1205.6	1431.1	1692.6	1980.4	2311.5	2673.7	8
9	420.98	523.34	643.15	784.00	946.42	1132.0	1348.6	1589.2	1859.4	2170.3	9
80	310.23	390.02	483.98	595.85	728.34	875.90	1048.7	1244.8	1473.3	1722.7	80
1	231.03	283.34	359.31	441.98	544.20	663.39	799.97	957.81	1136.9	1344.7	1
2	158.89	200.53	254.75	320.27	397.33	489.29	598.45	719.26	861.17	1022.2	2
3	104.01	136.11	177.86	225.31	283.26	351.46	432.75	527.53	634.14	761.66	3
4	66.618	90.417	118.33	154.18	195.87	246.25	305.64	376.21	458.60	563.08	4
5	41.558	56.895	77.220	101.05	131.68	171.29	210.31	260.95	321.30	391.67	5
6	25.008	34.806	47.653	64.677	84.640	110.29	140.11	176.14	218.56	269.11	6
7	14.201	20.409	28.407	38.893	52.787	69.080	90.015	114.35	148.77	187.38	7
8	7.7637	11.364	16.317	22.713	31.095	42.203	55.230	71.067	91.427	114.94	8
9	4.2620	6.0571	8.5579	12.730	17.719	24.260	32.926	43.689	56.146	71.330	9
90	3.0069	3.2565	4.6390	6.7840	9.7497	13.571	18.590	25.217	33.001	43.002	90
1	1.0896	1.5537	2.4129	3.4572	5.0265	7.2239	10.065	13.766	18.684	24.461	1
2	.6258	.8238	1.1734	1.6223	2.2969	3.2963	4.6558	6.3940	8.697	11.611	2
3	.2546	.3894	.6093	.8693	1.2499	1.7229	2.3120	3.0413	3.9252	5.0015	3
4	.0753	.1173	.1775	.2543	.3613	.5017	.6701	.8706	1.1006	1.3681	4
5	.0217	.0349	.0508	.0703	.0949	.1260	.1643	.2106	.2654	.3301	5
6	.0027	.0039	.0053	.0072	.0093	.0120	.0156	.0201	.0254	.0318	6
7		.0012	.0016	.0021	.0028	.0036	.0046	.0058	.0072	.0088	7
8			.0003	.0004	.0005	.0006	.0008	.0010	.0012	.0015	8
9				.0001	.0001	.0001	.0001	.0002	.0002	.0003	9

D. $\frac{x}{x-y}$ x BEING THE OLDER AGE. ($\frac{1}{2}$ PER CENT.)

x	10	11	12	13	14	15	16	17	18	19	x
25	229084										
6	210328	225825									
7	196310	207718	225117								
8	186891	194045	205316	220543							
9	179900	184809	191883	203028	218087						
30	173502	178162	185025	190930	201068	215981					
1	166752	171612	176425	181240	188177	199107	213875				
2	159848	164745	169547	174302	179059	185013	198711	211901			
3	152450	157458	162282	167012	171898	176842	183133	193770	208148		
4	144837	149879	154803	159546	164198	168801	173407	180045	190278	204659	34
5	136281	141743	146890	151705	156353	160910	165423	169937	176442	176442	35
6	127842	133339	138932	143709	148430	152978	157498	161953	166289	172643	36
7	119587	124945	130317	135540	140633	145506	149811	153969	158144	162541	37
8	111686	116888	122125	127375	132480	137282	141792	146198	150395	154613	38
9	104434	109107	114188	119304	124434	129420	134111	138517	142761	146923	39
40	97334	101965	106827	111888	116844	121402	126361	130941	135248	139386	40
1	90379	94977	99496	103948	108379	112693	116893	120981	124960	128730	41
2	84164	88257	92748	97160	101509	105793	109995	115067	119940	124721	42
3	78285	82257	86257	90646	94853	99207	103827	108479	113143	117679	43
4	72753	76524	80407	84317	88367	92423	96376	101462	106440	110970	44
5	67408	71184	74874	78375	82499	86396	90321	94885	99303	103753	45
6	62496	66058	69597	73279	76998	80741	84469	88486	92863	97147	46
7	57930	60807	64272	67784	71298	74815	78559	82555	86843	90833	47
8	52158	55428	58789	62140	65535	68932	72430	75953	79610	83414	48
9	47008	50118	53261	56490	59710	62972	66237	69597	72982	76885	49
50	41978	44895	47870	50872	53957	57032	60146	63266	66478	69790	50
1	37126	39861	42631	45466	48306	51235	54155	57114	60075	63123	51
2	33113	35630	38255	40918	43624	46360	49171	51973	54813	57655	52
3	29815	32165	34610	37159	39742	42360	45033	47763	50465	53244	53
4	27089	29258	31565	33964	36466	39000	41545	44192	46872	49544	54
5	24829	26899	29053	31344	33726	36210	38727	41283	43883	46544	55
6	22938	24879	26954	29112	31407	33794	36283	38805	41377	43971	56
7	21400	23238	25204	27306	29493	31818	34236	36759	39313	41918	57
8	20149	21889	23769	25780	27930	30166	32544	35018	37598	40210	58
9	19098	20755	22648	24484	26566	28770	31074	33524	36072	38729	59
60	18250	19800	21518	23377	25384	27532	29829	32216	34756	37390	60
1	17494	18990	20692	22520	24493	26619	28893	31021	33505	36146	61
2	16654	18120	19884	21766	23820	26028	28393	29709	32147	34704	62
3	15818	17243	18761	20390	22122	24041	26118	28361	30760	33326	63
4	14949	16320	17790	19357	21038	22824	24804	26947	29281	31737	64
5	14053	15361	16771	18281	19991	21818	23764	25849	28101	30499	65
6	13131	14387	15727	17170	18716	20364	22133	24018	26005	28230	66
7	12223	13436	14721	16092	17568	19151	20847	22647	24570	26702	67
8	11299	12474	13712	15023	16422	17929	19544	21295	23111	25074	68
9	10363	11494	12689	13943	15282	16706	18228	19981	21831	23510	69
70	9425.6	10495	11640	12850	14125	15476	16917	18469	20133	21906	70
1	8491.2	9491.3	10569	11721	12940	14424	15884	17035	18508	20274	71
2	7693.2	8520.6	9524.2	10605	11768	12985	14273	15338	17004	18493	72
3	6781.6	7577.5	8502.9	9504.5	10588	11737	12958	14243	15308	17059	73
4	5911.9	6675.8	7514.6	8432.4	9425.6	10405	11465	12510	13545	15278	74
5	5131.3	5813.0	6584.2	7389.0	8201.4	9028.0	9879.9	10856	11858	13498	75
6	4398.6	5000.4	5684.2	6396.7	7200.4	7933.4	8780.2	9648.5	10643.1	11704.0	76
7	3711.4	4235.4	4814.9	5454.6	6159.4	6933.4	7780.2	8638.2	9516.2	10215.1	77
8	3082.5	3532.0	4030.7	4582.2	5190.9	5861.7	6598.2	7404.1	8276.2	9151.1	78
9	2510.3	2894.2	3316.2	3784.4	4302.1	4873.7	5503.5	6195.0	6951.6	7770.4	79
80	2010.7	2325.7	2681.3	3072.3	3506.0	3985.7	4515.3	5098.7	5739.4	6440.4	80
1	1573.3	1836.4	2124.1	2448.9	2806.0	3202.1	3640.3	4123.9	4656.8	5241.9	81
2	1209.0	1414.6	1651.1	1909.8	2201.8	2522.9	2879.1	3273.6	3707.8	4198.9	82
3	904.07	1069.3	1251.1	1460.3	1689.1	1947.4	2231.4	2546.4	2894.8	3289.3	83
4	662.15	785.95	929.61	1087.7	1269.6	1468.4	1692.9	1930.8	2213.7	2516.5	84
5	473.81	565.50	671.24	793.93	929.89	1084.2	1254.1	1445.9	1656.7	1890.6	85
6	328.05	395.59	473.64	562.21	664.96	778.03	903.11	1050.4	1210.0	1387.6	86
7	219.64	267.74	322.87	386.67	463.85	542.72	635.00	741.16	857.30	999.37	87
8	142.62	175.60	214.06	258.18	309.07	366.85	433.91	507.68	591.56	685.41	88
9	89.676	111.27	137.00	167.01	201.39	241.13	286.21	338.58	398.09	462.81	89
90	54.630	68.680	85.217	104.98	127.91	154.24	184.67	219.20	259.27	303.35	90
1	31.822	40.477	50.887	63.140	77.743	94.769	114.29	136.83	162.42	192.10	91
2	18.487	24.063	30.670	38.432	47.686	59.715	71.574	86.311	103.34	123.66	92
3	10.453	13.679	17.825	22.645	28.468	35.323	43.463	53.018	63.954	78.540	93
4	5.4873	7.4476	9.7464	12.700	16.134	20.244	25.198	30.948	37.775	46.555	94
5	2.6017	3.5619	4.8344	6.3268	8.2440	10.473	13.167	16.337	20.115	24.521	95
6	1.0609	1.4766	2.0216	2.7439	3.6908	4.6790	5.9442	7.4730	9.2723	11.417	96
7	.3515	.5051	.7031	.9626	1.3066	1.7099	2.2221	2.8306	3.5546	4.4154	97
8	.0721	.1054	.1515	.2109	.2888	.3919	.5129	.6644	.8491	1.0676	98
9	.0168	.0240	.0351	.0505	.0703	.0962	.1306	.1709	.2228	.2830	99

$D_{\frac{x}{s.y.}}$ x BEING THE OLDER AGE. ($\frac{4}{3}$ PER CENT.)

x	20	21	22	23	24	25	26	27	28	29	x
35	200537										
6	182990	196208									
7	169721	178521	191762								
8	158833	164013	174461	187433							
9	151042	155194	161104	170461	183104						
40	143448	147471	151496	157295	166481	173775					
1	136011	139975	143900	147828	153496	162401	174446				
2	128469	132518	136609	140623	146357	149683	158589	170351			
3	121943	126040	129908	133591	137338	141096	146496	154904	166490		
4	115081	119200	123116	126888	130597	134240	137913	143192	151509	162746	44
5	108213	112550	116630	120461	124152	127770	131354	134938	140104	149241	5
6	101542	105908	110152	114145	117894	121506	125048	128555	132068	137118	6
7	94561	98798	103045	107175	111060	114708	118223	121668	125080	128494	7
8	87355	91425	95520	99626	103819	107375	110902	114300	117631	120940	8
9	80344	83939	87848	91786	95730	99667	103176	106666	109830	113031	9
50	73255	76741	80174	83908	87668	91437	95101	98548	101786	104904	50
1	66198	69591	72970	76131	79076	82246	86325	90305	93578	96652	1
2	60580	63326	66759	69984	73083	76468	79592	83327	86996	89807	2
3	56004	58446	61707	64947	67923	70972	74277	77605	80941	84185	3
4	52250	54659	57747	60556	63637	66684	69447	72891	76156	79431	4
5	49198	51884	54874	57343	60131	63191	66197	69159	72380	75623	5
6	46637	49295	51969	54684	57463	60253	63318	66331	69299	72526	6
7	44546	47247	49940	52668	55399	58210	61041	64146	67198	70205	7
8	42975	45664	48327	51081	53871	56664	59539	62485	65611	68733	8
9	41421	44166	46935	49781	52618	55463	58370	61331	64314	67586	9
60	40153	42943	45789	48660	51611	54552	57533	60515	63596	66678	60
1	39494	41759	44661	47621	50607	53675	56734	59834	62936	66129	1
2	37905	40356	43328	46340	49411	52509	55698	58987	62085	65302	2
3	36994	38832	41784	44861	47979	51159	54397	57663	60949	64280	3
4	36493	37137	40094	43110	46285	49502	52782	56092	59493	62984	4
5	36213	36332	38162	41170	44300	47543	50863	54239	57640	61135	5
6	36074	36359	38173	39970	42150	45354	48694	52078	55530	59011	6
7	36008	36409	38149	37014	39973	43129	46408	49826	53289	56820	7
8	36250	36904	38145	34865	37773	40798	44014	47360	50848	54382	8
9	36506	37719	39114	32699	35466	38424	41501	44772	48176	51724	9
70	33608	35830	38071	39466	38115	35916	33912	42023	45341	48788	70
1	32059	33974	36010	38267	39700	33345	36167	39183	42321	45657	1
2	30344	32135	34057	36100	38365	39815	33461	36292	39319	42467	2
3	28624	30302	32089	34007	36046	38306	39751	33392	36217	39237	3
4	26917	28469	30133	31906	33808	35890	38071	39496	33115	35916	4
5	25217	26634	28161	29797	31540	33410	35398	37602	27996	32561	5
6	23535	24829	26210	27697	29292	30990	32813	34750	26898	29221	6
7	21869	23033	24279	25609	27041	28576	30212	31967	23832	25900	7
8	20221	21283	22403	23589	24854	26217	27679	29235	20905	22680	8
9	18519	19360	20594	21845	23168	24543	25986	27598	18659	19627	9
80	17190	18015	18890	19814	10788	11820	12921	14106	15377	16731	80
1	15821	16570	17320	18119	8963	9853	10796	11801	12884	14044	1
2	14710	15286	15911	16582	7300	8059	8859	9708	10610	11584	2
3	13708	14184	14775	15238	6521	7128	7835	8594	9394	9994	3
4	12850	13219	13623	14066	5453	5961	6513	7196	7911	8461	4
5	12149	12438	12749	13094	4472	4881	5323	5899	6502	6917	5
6	11583	11800	12038	12302	3592	3908	4251	4620	4915	5222	6
7	11032	11294	11499	11664	2795	2915	3074	3263	3484	3727	7
8	10500	10754	10933	11174	1330	1502	1691	1898	2121	2362	8
9	10000	10251	10421	10613	916	1038	1172	1319	1480	1655	9
90	35407	40955	47216	54102	61740	70187	79512	89786	10107	11341	90
1	32476	26334	30345	34954	40085	45745	52004	58913	66526	74855	1
2	14508	16975	19813	22918	26422	30275	34549	39276	44494	50243	2
3	90869	10747	12574	14678	16978	19573	22426	25592	29093	32958	3
4	54541	64739	76873	89501	10456	12096	13945	15978	18234	20729	4
5	20569	35404	42033	49704	58156	67879	78615	90519	10372	11836	5
6	13917	18783	20094	23851	28211	33007	38262	44562	51375	58867	6
7	84306	66373	70918	95886	11350	13434	15718	18346	21220	24465	7
8	13246	16310	19882	23975	28701	34073	40301	47153	55038	63661	8
9	8358	4415	5436	6627	7991	9568	11358	13434	15718	18346	9

D_{xy} x BEING THE OLDER AGE. (4½ PER CENT.)

x	80	81	82	83	84	85	86	87	88	89	x
45	159236										
6	145082	155843									
7	139412	141161	151631								
8	124231	128986	136478	146600							
9	116201	119372	123942	131141	140867						
50	107968	110990	114019	118883	125259	134549					
1	99613	102517	105892	109268	112413	118941	127763				
2	92758	95600	98386	101145	103908	107883	114149	122615			
3	87237	90102	92863	95569	98250	100931	104795	110881	119105		
4	82614	85608	88421	91130	93786	96416	99047	102839	108413	116892	54
5	78874	82035	85009	87901	90491	93129	95741	98353	102118	108040	5
6	75775	79033	82201	85180	87978	90674	93316	95954	98552	102324	6
7	73474	76766	80067	83276	86294	89129	91860	94537	97198	99841	7
8	71808	75162	78520	81896	85178	88285	91164	93958	96696	99408	8
9	70802	73970	77414	80883	84360	87741	90921	93908	96786	99606	9
60	70070	73404	76889	80260	83556	87461	90966	94263	97300	100343	60
1	69345	72873	76340	79756	83470	87210	90960	94605	98034	101254	1
2	68616	71961	75312	78610	82154	85803	89498	93179	96811	101170	2
3	67812	71043	74407	77689	81212	84882	88593	92309	96018	101634	3
4	66919	69758	73297	76661	80372	84215	88101	92011	95903	100019	4
5	66119	68150	71683	75320	79063	83001	86950	90919	94871	98831	5
6	65290	66167	69771	73389	77112	80963	84976	89019	93002	97333	6
7	64393	64404	67994	71393	75094	78904	82741	86651	90508	94514	7
8	63986	61821	65358	69083	72877	76834	80523	84438	88734	92956	8
9	63519	59955	62683	66464	70273	74112	77955	81910	85893	90203	9
70	52381	56021	59734	63479	67329	71166	75054	78945	82950	86944	70
1	49128	52746	56412	60150	63922	67798	71661	75577	79405	83228	1
2	45815	49298	52929	56607	60353	64143	68032	71909	75838	79770	2
3	42379	45720	49196	52819	56490	60233	64010	67893	71761	75682	3
4	38912	42028	45341	48788	52381	56021	59734	63479	67329	71166	4
5	35316	38261	41325	44533	47972	51505	55084	58735	62418	66203	5
6	31730	34415	37285	40270	43446	46743	50191	53679	57238	60825	6
7	28137	30553	33133	35902	38777	41834	45018	48329	51688	55118	7
8	24543	26777	29076	31536	34163	36902	39812	42858	45963	49109	8
9	21294	23142	25141	27299	29609	32079	34647	37379	40220	43183	9
80	18184	19738	21440	23292	25292	27432	29719	32099	34630	37292	80
1	15281	16608	18018	19581	21273	23100	25054	27143	29317	31629	1
2	12627	13739	14932	16200	17608	19126	20769	22526	24405	26359	2
3	10245	11168	12151	13207	14328	15571	16916	18369	19923	21585	3
4	8158*0	8906*5	9708*9	10564	11482	12456	13537	14706	15999	17320	4
5	6373*9	6967*3	7606*6	8291*9	9021*9	9805*3	10638	11561	12560	13639	5
6	4872*5	5338*5	5835*6	6371*0	6945*0	7556*4	8212*8	8910*1	9643*1	10420	6
7	3617*8	3976*7	4357*1	4762*8	5199*8	5683*2	6197*3	6792*8	7272*1	7903*0	7
8	2620*0	2892*4	3179*4	3483*5	3807*9	4157*2	4531*7	4930*8	5358*9	5814*1	8
9	1843*0	2044*1	2256*6	2480*5	2717*8	2970*8	3243*4	3535*6	3846*9	4181*0	9
90	1267*7	1411*5	1565*5	1728*3	1899*8	2081*4	2275*3	2484*0	2707*8	2946*2	90
1	840*31	939*29	1045*8	1169*0	1300*5	1447*6	1542*2	1685*8	1840*5	2006*3	1
2	595*56	634*64	709*89	789*86	876*05	967*12	1063*1	1164*8	1279*2	1390*0	2
3	372*17	418*93	470*10	525*47	585*08	648*93	716*39	787*47	862*79	943*13	3
4	234*83	265*17	298*40	334*95	374*39	416*87	462*36	510*43	561*07	614*74	4
5	134*56	152*43	172*13	193*76	217*42	243*03	270*60	300*13	331*33	364*21	5
6	67*178	76*369	86*515	97*695	109*97	123*40	137*93	153*59	170*34	188*05	6
7	23*032	31*989	36*366	41*198	46*521	53*367	58*763	65*694	73*193	81*116	7
8	7*3394	8*4098	9*5968	10*910	12*359	13*956	15*710	17*629	19*705	21*941	8
9	2*1220	2*4465	2*8032	3*1989	3*6366	4*1198	4*6521	5*2367	5*8763	6*5684	9

NOTE.—The summation of the values on this page is not given, but may easily be made if required in any extreme case.

DIFFERENCE OF AGE Ten YEARS.
(Female the elder).

x	N _{x·y}	N _{x·y} ⁻²	D _{x·y} ⁻¹	Annuities.	
				Joint Lives. a _{x·y}	Rever- sionary. a _{x·y} ²
18	62081	18299	18074	11·221	3·307
9	56921	17362	19380	11·031	3·365
20	52122	16350	20838	10·861	3·407
1	47670	15287	22463	10·708	3·434
2	43543	14204	24233	10·552	3·442
3	39738	13119	26282	10·444	3·448
4	36229	12056	28497	10·324	3·436
5	32998	11031	30948	10·212	3·414
6	30025	10060	33635	10·099	3·384
7	27292	91537	36595	9·988	3·350
8	24782	83101	39820	9·868	3·309
9	22479	75254	43417	9·760	3·267
80	20367	67977	47350	9·644	3·219
1	18433	61239	51706	9·531	3·166
2	16664	55024	56545	9·423	3·111
3	15048	49318	61881	9·312	3·052
4	13574	44107	67815	9·205	2·991
5	12229	39365	74937	9·164	2·950
6	11005	35075	81967	9·020	2·875
7	98903	31205	89748	8·876	2·801
8	88770	27722	98686	8·760	2·736
9	79562	24588	10860	8·640	2·670
40	71206	21771	11968	8·522	2·606
1	63631	19236	13200	8·399	2·539
2	56773	16960	14583	8·279	2·473
3	50571	14917	16125	8·155	2·405
4	44969	13086	17849	8·027	2·336
5	39913	11446	19778	7·894	2·264
6	35355	99780	21941	7·757	2·189
7	31252	86669	24372	7·617	2·112
8	27562	75064	27103	7·470	2·034
9	24248	64900	30173	7·317	1·958
50	21274	56094	33625	7·153	1·886
1	18608	48541	37506	6·979	1·821
2	16220	42124	41872	6·792	1·764
3	14083	36636	46809	6·592	1·715
4	12175	31900	52418	6·382	1·672
5	10476	27784	58828	6·163	1·634
6	89651	24177	66200	5·935	1·601
7	76270	20997	74733	5·700	1·569
8	64462	18174	84686	5·459	1·539
9	54087	15654	96391	5·214	1·509
60	45035	13403	11047	4·975	1·481
1	37186	11385	12739	4·737	1·450
2	30427	95868	14796	4·502	1·418
3	24654	79922	17322	4·271	1·384
4	19767	65964	20465	4·045	1·350
5	15664	53831	24369	3·817	1·312
6	12257	43418	29355	3·598	1·275
7	94586	34577	35729	3·379	1·235
8	71866	27156	44015	3·163	1·195
9	53681	21006	54988	2·952	1·155
70	39384	15963	69846	2·749	1·115
1	28258	11901	90048	2·545	1·072
2	19837	86819	11874	2·356	1·031
3	13588	62026	16002	2·174	0·993
4	90693	43119	22131	2·007	0·954
5	59042	29304	31596	1·865	0·926
6	37466	19382	46346	1·736	0·898
7	23169	12436	69945	1·621	0·870
8	13946	77925	10842	1·512	0·844
9	81079	47539	17129	1·389	0·814
80	45432	27578	28053	1·275	0·774
1	24297	15670	47315		
2	11837	80436	80257		
3	48220	86619	14254		
4	15563	13267	30621		
5	31089	41198	80293		
6	00000	63788	32166		

DIFFERENCE OF AGE Nine YEARS.
(Female the elder.)

x	N _{x·y}	N _{x·y} ⁻²	D _{x·y} ⁻¹	Annuities.	
				Joint Lives. a _{x·y}	Rever- sionary. a _{x·y} ²
18	66123	19502	17104	11·310	3·336
9	60667	18521	18328	11·119	3·395
20	55589	17464	19694	10·948	3·439
1	50875	16350	21215	10·793	3·469
2	46510	15212	22907	10·654	3·485
3	42469	14074	24746	10·509	3·483
4	38747	12957	26869	10·411	3·481
5	35317	11879	29158	10·298	3·464
6	32161	10855	31681	10·189	3·439
7	29257	98971	34440	10·076	3·409
8	26589	90023	37480	9·966	3·374
9	24139	81685	40813	9·852	3·334
20	21892	73926	44495	9·741	3·289
1	19832	66719	48544	9·627	3·239
2	17946	60046	53032	9·517	3·184
3	16222	53906	58013	9·411	3·127
4	14648	48285	63506	9·302	3·066
5	13211	43163	69611	9·196	3·005
6	11901	38515	76352	9·087	2·941
7	10709	34318	83855	8·980	2·878
8	96237	30536	92157	8·869	2·814
9	86370	27131	10135	8·754	2·750
40	77404	24069	11153	8·633	2·684
1	69269	21319	12293	8·513	2·621
2	61894	18846	13559	8·392	2·555
3	55219	16623	14980	8·272	2·490
4	49182	14627	16567	8·148	2·423
5	43730	12836	18340	8·020	2·354
6	38810	11232	20325	7·888	2·283
7	34376	97953	22552	7·752	2·209
8	30384	85196	25050	7·611	2·134
9	26793	73976	27853	7·463	2·060
50	23567	64209	30997	7·305	1·990
1	20671	55799	34524	7·136	1·926
2	18072	48626	38483	6·955	1·871
3	15744	42468	42948	6·762	1·824
4	13661	37137	48005	6·558	1·783
5	11801	32489	53769	6·345	1·747
6	10145	28402	60372	6·125	1·715
7	86739	24788	67990	5·897	1·685
8	73124	21566	76834	5·618	1·657
9	61655	18679	87192	5·376	1·629
60	51598	16083	99426	5·130	1·599
1	42841	13749	11420	4·892	1·570
2	35267	11650	13203	4·656	1·538
3	28763	97847	15376	4·423	1·505
4	23224	81337	18055	4·193	1·469
5	18551	66935	21399	3·970	1·432
6	14640	54467	25569	3·743	1·393
7	11405	43806	30912	3·526	1·354
8	87582	34760	37780	3·309	1·313
9	66194	27187	46754	3·095	1·271
70	49160	20930	58705	2·886	1·229
1	35822	15824	75976	2·722	1·202
2	25538	11734	97237	2·483	1·141
3	17792	85031	12909	2·296	1·098
4	12086	60289	17527	2·118	1·057
5	79947	41539	24440	1·954	1·015
6	51543	27955	35206	1·815	0·984
7	32370	18286	52156	1·688	0·954
8	19799	11598	79546	1·575	0·923
9	11781	71692	12472	1·469	0·894
80	67661	43257	19942	1·349	0·863
1	37438	24764	33087		
2	19767	13888	56591		
3	95039	70303	97432		
4	38161	31550	17582		
5	12132	11249	38417		
6	23854	34369	10260		
7	00000	52062	41922		

DIFFERENCE OF AGE Eight YEARS.
(Female the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^2$
18	70367	20753	16188	11.391	3.359
9	64602	19728	17345	11.205	3.422
20	59233	18621	18625	11.032	3.468
1	54245	17458	20050	10.876	3.500
2	49623	16265	21635	10.736	3.519
3	45348	15070	23393	10.608	3.525
4	41396	13899	25299	10.473	3.516
5	37758	12766	27492	10.380	3.510
6	34408	11688	29848	10.270	3.489
7	31325	10679	32439	10.162	3.464
8	28490	97330	35273	10.049	3.433
9	25886	88486	38399	9.940	3.398
30	23495	80240	41826	9.827	3.356
1	21303	72556	45617	9.718	3.310
2	19295	65420	49787	9.606	3.257
3	17457	58828	54409	9.498	3.201
4	15777	52779	59536	9.393	3.142
5	14243	47253	65188	9.285	3.080
6	12844	42233	71466	9.179	3.018
7	11568	37686	78396	9.069	2.954
8	10407	33584	86109	8.962	2.892
9	93502	29887	94642	8.849	2.829
40	83895	26561	10409	8.733	2.765
1	75166	23572	11456	8.611	2.700
2	67246	20888	12627	8.491	2.638
3	60067	18472	13929	8.367	2.573
4	53570	16300	15391	8.245	2.509
5	47695	14348	17023	8.119	2.442
6	42389	12597	18847	7.989	2.374
7	37603	11026	20891	7.856	2.303
8	33289	96287	23180	7.716	2.232
9	29404	83953	25743	7.569	2.161
50	25909	73171	28613	7.413	2.094
1	22767	63843	31827	7.246	2.032
2	19944	55857	35426	7.065	1.979
3	17411	48973	39457	6.870	1.932
4	15141	42991	44047	6.669	1.894
5	13110	37760	49242	6.456	1.859
6	11298	33145	55178	6.234	1.829
7	96848	29050	62004	6.005	1.801
8	82542	25387	69901	5.770	1.775
9	69902	22093	79111	5.530	1.748
60	58783	19118	89994	5.290	1.721
1	49053	16427	10278	5.042	1.688
2	40604	14000	11835	4.805	1.657
3	33115	11882	13720	4.571	1.630
4	27076	99503	16026	4.339	1.595
5	21779	82469	18879	4.112	1.557
6	17325	67670	22452	3.890	1.519
7	13611	54906	26925	3.665	1.478
8	10552	43997	32686	3.449	1.438
9	80597	34766	40132	3.235	1.395
70	60563	27062	49914	3.023	1.351
1	44694	20726	63018	2.817	1.306
2	32343	15584	80966	2.619	1.262
3	22884	11480	10571	2.419	1.214
4	15811	82555	14139	2.236	1.167
5	10645	58017	19355	2.060	1.123
6	69728	39581	27233	1.899	1.078
7	44487	26345	39619	1.763	1.044
8	27628	17035	59315	1.639	1.010
9	16703	10670	92531	1.546	0.987
80	98159	65114	14520	1.425	0.945
1	55644	38770	23521		
2	30375	21880	39574		
3	15819	12102	68700		
4	74978	60368	12018		
5	29643	26678	22058		
6	92730	93396	49092		
7	17949	27964	13372		
8	00000	41623	55714		

DIFFERENCE OF AGE Seven YEARS.
(Female the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^2$
18	74844	22241	15323	11.468	3.408
9	68753	21173	16416	11.286	3.476
20	63079	20016	17625	11.118	3.528
1	57806	18799	18963	10.962	3.565
2	52915	17553	20447	10.820	3.589
3	48389	16301	22093	10.691	3.601
4	44207	15069	23915	10.572	3.604
5	40344	13881	25885	10.443	3.593
6	36791	12563	28144	10.354	3.536
7	33519	11501	30563	10.244	3.515
8	30509	10508	33225	10.137	3.490
9	27742	95686	36138	10.025	3.458
30	25201	86940	39353	9.917	3.421
1	22869	78774	42882	9.807	3.378
2	20731	71165	46786	9.699	3.330
3	18774	64114	51080	9.590	3.275
4	16983	57620	55837	9.483	3.217
5	15346	51674	61113	9.378	3.158
6	13852	46259	66925	9.270	3.096
7	12489	41344	73379	9.164	3.034
8	11247	36900	80502	9.054	2.971
9	10116	32890	88431	8.946	2.908
40	90875	29279	97203	8.833	2.846
1	81522	26031	10692	8.716	2.783
2	73024	23115	11768	8.593	2.720
3	65315	20494	12972	8.473	2.658
4	58327	18133	14311	8.347	2.595
5	52004	16010	15815	8.224	2.532
6	46288	14100	17494	8.098	2.467
7	41126	12386	19372	7.967	2.399
8	36468	10858	21472	7.830	2.331
9	32270	95065	23821	7.687	2.265
50	28489	83214	26446	7.534	2.201
1	25085	72916	29379	7.870	2.142
2	22023	64059	32657	7.192	2.092
3	19271	56394	36335	7.002	2.049
4	16801	49707	40483	6.802	2.012
5	14588	43837	45181	6.591	1.981
6	12609	38642	50534	6.372	1.953
7	10844	34018	56669	6.145	1.928
8	92756	29869	63747	5.913	1.904
9	78861	26124	71971	5.676	1.880
60	66607	22730	81601	5.435	1.855
1	55851	19646	93973	5.248	1.829
2	46463	16847	10652	4.949	1.795
3	38332	14329	12299	4.714	1.762
4	31339	12074	14301	4.482	1.727
5	25372	10081	16758	4.252	1.689
6	20323	83306	19808	4.026	1.650
7	16094	68155	23643	3.805	1.611
8	12582	55094	28471	3.582	1.569
9	97014	43961	34721	3.368	1.526
70	73674	34570	42843	3.156	1.481
1	55010	26768	53581	2.947	1.434
2	40316	20388	68053	2.744	1.387
3	28955	15228	88022	2.549	1.340
4	20318	11133	11578	2.352	1.289
5	13913	79353	15614	2.172	1.239
6	92768	55226	21567	2.001	1.191
7	60138	37260	30646	1.843	1.142
8	37944	24514	45057	1.710	1.105
9	23287	15654	68227	1.589	1.068
80	13899	96778	10653	1.481	1.031
1	80601	58253	17125		
2	45054	34193	28132		
3	24239	19007	48042		
4	12438	10359	84723		
5	58057	50863	15077		
6	22579	22090	28187		
7	69497	75680	63983		
8	13228	22277	17772		
9	00000	32474	75599		

DIFFERENCE OF AGE SIX YEARS.
(Female the elder.)

Difference of Age Five Years.
(Female the elder.)

x	N _{x'y}	N _{x²/y}	D ⁻¹ _{x'y}	Annuities.		x	N _{x'y}	N _{x²/y}	D ⁻¹ _{x'y}	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x²/y}					Joint Lives. a _{x'y}	Rever- sionary. a _{x²/y}
18	79560	23403	14506	11.541	3.395	18	84527	24796	13734	11.609	3.405
9	78124	22292	15538	11.362	3.464	19	77729	23645	14710	11.434	3.478
20	67130	21086	16681	11.198	3.517	20	71396	22390	15790	11.273	3.535
1	61557	19813	17944	11.046	3.555	1	65507	21063	16983	11.125	3.577
2	56386	18509	19337	10.903	3.579	2	60043	19701	18299	10.987	3.605
3	51596	17202	20880	10.772	3.592	3	54979	18332	19747	10.857	3.620
4	47169	15912	22587	10.654	3.594	4	50294	16984	21347	10.736	3.626
5	43082	14663	24470	10.542	3.588	5	45967	15676	23110	10.623	3.623
6	39309	13476	26499	10.416	3.571	6	41975	14429	25049	10.514	3.614
7	35838	12360	28817	10.327	3.562	7	38290	13259	27133	10.389	3.598
8	32644	11311	31301	10.218	3.540	8	34901	12156	29514	10.301	3.588
9	29706	10325	34039	10.112	3.515	9	31783	11119	32070	10.193	3.566
80	27006	94006	37036	10.002	3.482	30	28917	10144	34884	10.087	3.539
1	24527	85345	40345	9.895	3.443	1	26283	92289	37969	9.979	3.504
2	22254	77259	43979	9.787	3.398	2	23866	83713	41379	9.876	3.464
3	20170	69741	48001	9.682	3.348	3	21650	75724	45121	9.769	3.417
4	18263	62796	52421	9.574	3.292	4	19629	68318	49260	9.665	3.365
5	16518	56412	57316	9.467	3.233	5	17761	61490	53809	9.557	3.309
6	14924	50584	62741	9.363	3.174	6	16062	55234	59021	9.480	3.260
7	13469	45286	68717	9.255	3.112	7	14510	49582	64421	9.347	3.191
8	12142	40486	75351	9.149	3.051	8	13093	44354	70563	9.239	3.130
9	10932	36142	82674	9.038	2.988	9	11800	39662	77383	9.131	3.069
40	98310	32225	90824	8.929	2.927	40	10628	35418	84911	9.020	3.007
1	88294	28698	99841	8.815	2.865	1	95507	31594	93289	8.910	2.947
2	79189	25530	10982	8.697	2.804	2	85756	28153	10256	8.795	2.887
3	70917	22682	12089	8.573	2.742	3	76892	25059	11282	8.675	2.827
4	63413	20120	13327	8.451	2.681	4	68841	22275	12420	8.550	2.767
5	56613	17812	14704	8.324	2.619	5	61538	19771	13694	8.427	2.707
6	50460	15735	16252	8.201	2.557	6	54921	17513	15111	8.299	2.646
7	44898	13866	17981	8.073	2.493	7	48934	15480	16704	8.174	2.586
8	39876	12198	19911	7.940	2.429	8	43523	13661	18481	8.043	2.525
9	35344	10721	22066	7.799	2.366	9	38636	12049	20462	7.906	2.465
50	31258	94214	24471	7.649	2.306	50	34225	10629	22669	7.758	2.409
1	27575	82894	27154	7.488	2.251	1	30245	93890	25127	7.600	2.359
2	24258	73115	30146	7.313	2.204	2	26656	83141	27862	7.427	2.316
3	21272	64614	33496	7.125	2.164	3	23422	73757	30920	7.242	2.281
4	18589	57169	37265	6.927	2.130	4	20511	65499	34353	7.046	2.250
5	16181	50607	41525	6.719	2.101	5	17895	58193	38225	6.840	2.224
6	14024	44778	46367	6.503	2.076	6	15548	51677	42615	6.626	2.202
7	12097	39573	51900	6.278	2.054	7	13448	45836	47619	6.404	2.183
8	10301	34888	58263	6.002	2.033	8	11574	40563	53360	6.176	2.164
9	88571	30645	65635	5.813	2.011	9	99071	35771	59989	5.943	2.146
60	75101	26786	74237	5.575	1.989	60	84300	31400	67701	5.707	2.126
1	63246	23267	84355	5.335	1.963	1	71270	27400	76741	5.469	2.103
2	52868	20060	96354	5.094	1.933	2	59831	23740	87483	5.234	2.077
3	43834	17157	11069	4.852	1.899	3	49844	20413	10013	4.991	2.044
4	36033	14549	12819	4.619	1.865	4	41177	17406	11538	4.751	2.008
5	29346	12222	14953	4.388	1.828	5	33716	14715	13404	4.519	1.972
6	23658	10174	17583	4.163	1.789	6	27343	12325	15689	4.290	1.934
7	18864	83823	20859	3.935	1.748	7	21952	10228	18515	4.063	1.894
8	14864	68320	25000	3.671	1.708	8	17408	83944	22056	3.840	1.851
9	11558	54991	30242	3.495	1.663	9	13642	68123	26556	3.623	1.809
70	88599	43667	37067	3.284	1.619	70	10545	54566	32286	3.405	1.762
1	66855	34157	45991	3.075	1.571	1	80320	43098	39790	3.196	1.715
2	49572	26301	57861	2.868	1.522	2	60185	33522	49665	2.989	1.665
3	36056	19899	73982	2.667	1.472	3	44288	25639	62904	2.786	1.613
4	25683	14750	96406	2.476	1.422	4	31947	19250	81030	2.589	1.560
5	17862	10688	12786	2.284	1.367	5	22554	14143	10646	2.401	1.506
6	12114	75442	17399	2.108	1.313	6	15535	10149	14247	2.213	1.446
7	79934	51931	23752	1.899	1.233	7	10428	70856	19579	2.042	1.387
8	51242	34632	34853	1.785	1.207	8	68048	48217	27609	1.879	1.331
9	31947	22502	51827	1.656	1.166	9	43104	31754	40090	1.728	1.273
80	19357	14183	79432	1.538	1.127	80	26531	20365	60339	1.601	1.229
1	11398	86466	12564			1	15858	12658	93687		
2	65162	51281	20483			2	92031	76016	15025		
3	35881	29648	34152			3	51816	44381	24866		
4	19005	16217	59257			4	28076	25248	42123		
5	95986	86984	10631			5	14625	13572	74343		
6	44083	41954	19270			6	72638	71512	13585		
7	16862	17855	36736			7	32814	33797	25110		
8	51013	60030	85082			8	12332	14128	48822		
9	95444	17334	24114			9	36645	46525	11538		
90	00000	24871	10477			90	67235	13214	33420		
1						1	00000	18427	14873		

DIFFERENCE OF AGE FOUR YEARS.
(Female the elder.)

x	N _{x'y}	N _{x'y} ⁻²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
18	89758	26230	13004	11.672	3.411
9	82578	25040	13927	11.501	3.487
20	75888	23740	14948	11.344	3.549
1	69668	22360	16076	11.200	3.595
2	63894	20939	17319	11.066	3.626
3	58543	19509	18687	10.940	3.646
4	53589	18098	20188	10.819	3.654
5	49011	16732	21841	10.704	3.654
6	44784	15425	23658	10.595	3.649
7	40885	14195	25649	10.487	3.641
8	37287	13039	27790	10.382	3.624
9	33980	11950	30238	10.275	3.613
30	30937	10924	32866	10.168	3.590
1	28141	99589	35764	10.064	3.562
2	25573	90523	38942	9.959	3.525
3	23217	82049	42454	9.857	3.483
4	21058	74180	46305	9.751	3.435
5	19080	66899	50565	9.648	3.383
6	17270	60208	55243	9.540	3.326
7	15615	54086	60419	9.434	3.268
8	14103	48514	66152	9.329	3.209
9	12723	43452	72467	9.220	3.149
40	11465	38869	79478	9.112	3.089
1	10318	34725	87215	8.999	3.029
2	92748	30994	95277	8.888	2.970
3	83257	27634	10536	8.772	2.912
4	74630	24610	11591	8.650	2.853
5	66794	21888	12762	8.524	2.793
6	59688	19439	14073	8.400	2.736
7	53249	17229	15532	8.271	2.676
8	47425	15250	17169	8.142	2.618
9	42160	13492	18992	8.007	2.562
50	37403	11943	21021	7.862	2.511
1	33106	10587	23276	7.706	2.464
2	29228	94094	25782	7.536	2.426
3	25728	83778	28778	7.404	2.411
4	22575	74662	31711	7.153	2.368
5	19737	66558	35237	6.955	2.345
6	17188	59303	39228	6.743	2.326
7	14903	52774	43766	6.522	2.310
8	12860	46857	48958	6.296	2.294
9	11040	41463	54940	6.065	2.278
60	94242	36527	61878	5.832	2.260
1	79954	31996	69990	5.596	2.239
2	67380	27835	79531	5.359	2.214
3	56373	24038	90849	5.121	2.184
4	46719	20593	10437	4.884	2.149
5	38502	17591	12064	4.645	2.122
6	31392	14826	14064	4.415	2.085
7	25339	12379	16522	4.187	2.045
8	20232	10233	19578	3.961	2.003
9	15963	83619	23429	3.740	1.959
70	12438	67525	28351	3.526	1.914
1	95510	53794	34558	3.310	1.864
2	72237	42246	42968	3.104	1.815
3	53716	32637	53993	2.900	1.762
4	39202	24770	68894	2.701	1.707
5	28026	18434	89483	2.508	1.650
6	19597	13413	11863	2.325	1.591
7	13360	95209	16033	2.142	1.526
8	88688	65709	22267	1.975	1.463
9	57191	44164	31749	1.816	1.402
80	35766	28707	46674	1.669	1.340
1	21715	18156	71168		
2	12790	11117	11205		
3	73089	65706	18243		
4	40485	37726	30670		
5	21563	21093	52849		
6	11037	11121	95003		
7	53886	57433	17705		
8	23920	26651	33371		
9	88248	10926	66247		
90	25711	35329	15991		
1	46334	98166	47443		
2	00000	13917	21583		

DIFFERENCE OF AGE THREE YEARS.
(Female the elder.)

x	N _{x'y}	N _{x'y} ²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
18	95269	27703	12315	11.732	3.412
9	87686	26477	13182	11.559	3.490
	80620	25135	14152	11.409	3.557
20					
1	74049	23704	15219	11.270	3.608
2	67949	22227	16394	11.140	3.644
3	62295	20735	17687	11.018	3.667
4	57061	19261	19105	10.902	3.680
5	52220	17831	20656	10.787	3.683
6	47747	16466	22359	10.676	3.682
7	43619	15178	24224	10.566	3.677
8	39812	13963	26269	10.458	3.668
9	36300	12820	28471	10.355	3.650
30	33073	11743	30989	10.249	3.639
1	30105	10727	33695	10.144	3.614
2	27379	97712	36680	10.043	3.584
3	24876	88755	39954	9.939	3.546
4	22581	80408	43567	9.838	3.503
5	20477	72671	47532	9.733	3.454
6	18551	65537	51913	9.630	3.402
7	16788	58990	56722	9.522	3.346
8	15176	53007	62042	9.415	3.289
9	13704	47560	67936	9.310	3.231
40	12360	42616	74427	9.199	3.172
1	11135	38141	81635	9.090	3.114
2	10019	34098	89587	8.976	3.055
3	90033	30453	98441	8.863	2.998
4	80794	27170	10824	8.745	2.941
5	72398	24213	11910	8.623	2.884
6	64773	21551	13115	8.495	2.826
7	57860	19153	14464	8.369	2.770
8	51596	17003	15964	8.237	2.714
9	45928	15090	17644	8.104	2.662
50	40803	13401	19511	7.961	2.615
1	36170	11921	21583	7.807	2.573
2	31983	10634	23883	7.638	2.540
3	28201	95034	26444	7.457	2.513
4	24789	85013	29309	7.265	2.492
5	21715	76067	32528	7.063	2.474
6	18950	68021	36162	6.853	2.460
7	16467	60751	40287	6.634	2.447
8	14245	54137	44996	6.410	2.436
9	12261	48084	50409	6.181	2.424
60	10497	42528	56669	5.949	2.410
1	89332	37411	63965	5.714	2.393
2	75545	32698	72530	5.479	2.372
3	63446	28381	82649	5.244	2.346
4	52885	24449	94692	5.008	2.315
5	43722	20895	10913	4.771	2.280
6	35822	17707	12658	4.534	2.241
7	29070	14877	14810	4.305	2.208
8	23346	12372	17470	4.079	2.161
9	18537	10183	20797	3.855	2.118
70	14539	82794	25012	3.638	2.071
1	11253	66496	30434	3.425	2.024
2	85816	52669	37427	3.212	1.971
3	64409	41081	46714	3.009	1.919
4	47499	31491	59136	2.809	1.862
5	34355	23689	76083	2.614	1.802
6	24326	17459	99710	2.426	1.741
7	16835	12566	13350	2.247	1.678
8	11351	88187	18234	2.070	1.608
9	74466	60113	25612	1.907	1.540
80	47412	39885	36963	1.752	1.474
1	29247	25565	55050		
2	17499	15928	85120		
3	10148	95999	13603		
4	57036	55788	22501		
5	31048	31464	38579		
6	16240	17259	67533		
7	81637	89066	12381		
8	39132	45171	23530		
9	17055	20561	45282		
90	61634	82916	91812		
1	17580	26297	22700		
2	30548	73937	68844		
3	00000	10309	32735		

DIFFERENCE OF AGE TWO YEARS.
(Female the elder.)

DIFFERENCE OF AGE ONE YEAR.
(Female the elder.)

x	N _{x'y}	N _{x'y} ²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
18	10107	29217	11663	11.788	3.408
9	93066	27956	12488	11.622	3.491
20	85603	26572	13401	11.472	3.561
1	78663	25095	14409	11.335	3.616
2	72220	23558	15520	11.209	3.656
3	66247	22007	16741	11.090	3.684
4	60716	20470	18082	10.979	3.701
5	55600	18976	19547	10.868	3.709
6	50871	17547	21146	10.757	3.710
7	46503	16201	22894	10.646	3.709
8	42473	14928	24810	10.538	3.704
9	38757	13728	26914	10.431	3.695
30	35330	12598	29178	10.309	3.676
1	32182	11531	31770	10.224	3.663
2	29289	10525	34558	10.122	3.637
3	26631	95804	37632	10.022	3.605
4	24192	86981	41002	9.919	3.566
5	21956	78775	44721	9.819	3.523
6	19907	71193	48799	9.714	3.474
7	18031	64212	53303	9.611	3.423
8	16314	57814	58246	9.502	3.367
9	14745	51968	63715	9.395	3.311
40	13312	46645	69774	9.288	3.255
1	12004	41817	76447	9.177	3.197
2	10811	37451	83855	9.066	3.140
3	97244	33502	92032	8.950	3.083
4	87356	29941	10114	8.835	3.028
5	78365	26731	11121	8.715	2.973
6	70195	23839	12240	8.592	2.918
7	62777	21233	13480	8.462	2.862
8	56051	18900	14867	8.333	2.810
9	49955	16821	16406	8.196	2.760
50	44438	14983	18126	8.055	2.716
1	39447	13370	20033	7.902	2.678
2	34931	11964	22146	7.736	2.650
3	30849	10729	24497	7.557	2.628
4	27162	96310	27121	7.367	2.612
5	23835	86476	30064	7.166	2.600
6	20840	77593	33381	6.957	2.590
7	18147	69530	37139	6.740	2.582
8	15733	62166	41420	6.517	2.575
9	13575	55400	46330	6.289	2.567
60	11651	49165	51996	6.058	2.556
1	99443	43405	58581	5.825	2.543
2	84358	38083	66291	5.592	2.525
3	71090	33193	75373	5.358	2.502
4	59482	28723	86146	5.124	2.474
5	49383	24667	99075	4.890	2.442
6	40649	21014	11450	4.654	2.406
7	33147	17751	13330	4.418	2.366
8	26762	14854	15661	4.191	2.326
9	21373	12299	18557	3.966	2.282
70	16869	10072	22202	3.745	2.236
1	13144	81438	26850	3.529	2.187
2	10102	65026	32865	3.320	2.137
3	76441	51152	40688	3.110	2.081
4	56895	39588	51163	2.911	2.025
5	41583	30078	65305	2.716	1.965
6	29787	22407	84779	2.525	1.900
7	20875	16336	11221	2.342	1.833
8	14289	11625	15183	2.169	1.765
9	95209	80582	20973	1.997	1.690
80	61673	54224	29819	1.839	1.617
1	38736	35484	43597		
2	23548	22405	65842		
3	13871	13740	10333		
4	79110	81433	16779		
5	43687	46475	28230		
6	23350	25701	49171		
7	11988	13803	88016		
8	59109	69859	16455		
9	27789	34765	31928		
90	11855	15564	62756		
1	41821	61675	13033		
2	11462	19724	32940		
3	18855	54477	10442		
4	00000	73454	53036		

x	N _{x'y}	N _{x'y} ²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
18	10719	30756	11049	11.843	3.398
19	98732	29459	11828	11.678	3.484
20	90852	28035	12690	11.529	3.558
1	83523	26512	13644	11.396	3.617
2	76717	24931	14694	11.273	3.663
3	70409	23323	15849	11.159	3.696
4	64565	21725	17115	11.050	3.718
5	59160	20166	18501	10.945	3.731
6	54162	18674	20011	10.838	3.737
7	49544	17265	21652	10.727	3.738
8	45279	15935	23448	10.617	3.736
9	41345	14677	25419	10.509	3.731
30	37719	13490	27582	10.404	3.721
1	34377	12371	29914	10.284	3.701
2	31308	11314	32584	10.201	3.687
3	28487	10321	35455	10.100	3.659
4	25899	93902	38620	10.002	3.626
5	23522	85228	42088	9.900	3.587
6	21344	77186	45913	9.800	3.544
7	19348	69767	50105	9.694	3.496
8	17521	62945	54735	9.590	3.445
9	15849	56691	59817	9.480	3.391
40	14321	50978	65439	9.372	3.336
1	12926	45783	71668	9.264	3.281
2	11652	41072	78527	9.150	3.225
3	10491	36808	86143	9.037	3.171
4	94339	32949	94554	8.920	3.115
5	84716	29468	10392	8.804	3.062
6	75967	26327	11430	8.683	3.009
7	68018	23496	12580	8.557	2.956
8	60801	20961	13855	8.424	2.904
9	54256	18706	15278	8.289	2.858
50	48322	16708	16854	8.144	2.816
1	42949	14953	18611	7.993	2.783
2	38085	13420	20556	7.829	2.759
3	33682	12072	22715	7.651	2.742
4	29702	10872	25123	7.462	2.731
5	26107	97941	27820	7.263	2.725
6	22866	88177	30853	7.055	2.721
7	19949	79276	34283	6.839	2.718
8	17330	71107	38184	6.617	2.715
9	14985	63574	42648	6.391	2.711
60	12893	56605	47788	6.161	2.705
1	11032	50141	53750	5.930	2.695
2	93852	44151	60711	5.698	2.680
3	79336	38628	68890	5.465	2.661
4	66608	33565	78562	5.233	2.637
5	55506	28954	90078	5.000	2.608
6	45880	24786	10389	4.766	2.575
7	37587	21046	12058	4.532	2.538
8	30492	17707	14095	4.298	2.496
9	24481	14751	16635	4.072	2.454
70	19433	12151	19811	3.850	2.407
1	15237	98959	23833	3.631	2.358
2	11789	79548	28995	3.418	2.306
3	89897	63079	35729	3.212	2.254
4	67457	49233	44565	3.006	2.194
5	49759	37765	56501	2.811	2.134
6	36017	28414	72770	2.621	2.068
7	25535	20939	95405	2.436	1.998
8	17699	15093	12761	2.259	1.926
9	11972	10609	17464	2.091	1.853
80	78771	72602	24418	1.923	1.773
1	50338	48182	35170		
2	31160	31066	52144		
3	18650	19307	79931		
4	10804	11644	12846		
5	60533	67780	21050		
6	32813	37925	36074		
7	17209	20526	64085		
8	86596	10816	11697		
9	41809	53656	22328		
90	19210	26276	44250		
1	79853	11571	89087		
2	26979	46093	18913		
3	69634	14410	49661		
4	10524	38350	16917		
5	00000	47680	95024		

EQUAL AGES.

x	$N_{x:y}$	$N_{\frac{x}{2}}$	$D^{-1}_{x:y}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{\frac{x}{2}}$
18	11363	32333	10465	11.891	3.384
9	10470	31001	11203	11.730	3.473
20	96381	29537	12019	11.584	3.550
1	86641	27970	12920	11.452	3.614
2	81454	26340	13913	11.333	3.665
3	74790	24679	15005	11.222	3.703
4	68618	23023	16203	11.118	3.730
5	62907	21402	17512	11.016	3.748
6	57627	19845	18939	10.914	3.758
7	52747	18373	20490	10.808	3.765
8	48237	16982	22175	10.696	3.766
9	44075	15668	24023	10.588	3.764
30	40236	14424	26050	10.481	3.757
1	36700	13248	28278	10.378	3.746
2	33440	12140	30680	10.259	3.725
3	30449	11096	33430	10.179	3.709
4	27700	10117	36486	10.107	3.691
5	25178	92022	39643	9.981	3.648
6	22864	83522	43210	9.880	3.609
7	20742	75654	47142	9.778	3.566
8	18799	68404	51452	9.672	3.520
9	17020	61735	56211	9.567	3.470
40	15392	55625	61436	9.456	3.417
1	13904	50048	67215	9.346	3.364
2	12546	44979	73617	9.236	3.311
3	11306	40378	80669	9.120	3.257
4	10177	36211	88503	9.007	3.205
5	91472	32439	97156	8.887	3.152
6	82109	29032	10680	8.769	3.101
7	73597	25958	11748	8.646	3.050
8	65863	23204	12931	8.517	3.001
9	58840	20753	14239	8.378	2.955
50	52469	18586	15696	8.236	2.917
1	46690	16678	17305	8.080	2.886
2	41454	15011	19097	7.916	2.867
3	36711	13541	21084	7.740	2.855
4	32418	12230	23296	7.552	2.849
5	28538	11053	25770	7.354	2.848
6	25035	99827	28549	7.147	2.850
7	21879	90043	31686	6.933	2.853
8	19042	81025	35247	6.712	2.856
9	16498	72671	39314	6.486	2.857
60	14225	64911	43990	6.258	2.855
1	12201	57686	49400	6.027	2.850
2	10406	50963	55704	5.797	2.839
3	88207	44747	63091	5.565	2.823
4	74280	39030	71805	5.334	2.803
5	62107	33806	82148	5.102	2.777
6	51525	29067	94511	4.870	2.747
7	42384	24800	10940	4.637	2.713
8	34541	20974	12750	4.404	2.674
9	27862	17566	14972	4.171	2.630
70	22231	14559	17759	3.948	2.586
1	17529	11926	21267	3.728	2.536
2	13644	96551	25737	3.512	2.485
3	10471	77072	31522	3.301	2.429
4	79157	60637	39133	3.098	2.373
5	58837	46906	49214	2.896	2.308
6	42954	35630	62958	2.704	2.243
7	30842	26517	82567	2.547	2.189
8	21626	19319	10850	2.346	2.096
9	14813	13756	14678	2.174	2.019
80	98948	95460	20332	2.012	1.941
1	64226	64437	28800		
2	40453	42134	42066		
3	24656	26745	63302		
4	14513	16344	98590		
5	82594	96826	15991		
6	45419	55270	26899		
7	24149	30264	47016		
8	12408	16063	85168		
9	61074	82988	15872		
90	28758	40468	30944		
1	12838	19499	62816		
2	51025	66034	12927		
3	16165	33454	28686		
4	38107	99851	80945		
5	51157	24505	30310		
6	00000	27062	19548		

DIFFERENCE OF AGE ONE YEAR.
(Male the elder.)

x	$N_{x:y}$	$N_{\frac{x}{2}}$	$D^{-1}_{x:y}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{\frac{x}{2}}$
18	12041	33958	99146	11.938	3.367
9	11099	32575	10613	11.779	3.457
20	10220	31071	11384	11.634	3.537
1	94032	29460	12237	11.507	3.605
2	86443	27762	13176	11.390	3.661
3	79405	26071	14208	11.282	3.704
4	72886	24360	15340	11.181	3.737
5	66854	22681	16578	11.080	3.759
6	61276	21061	17927	10.985	3.776
7	56119	19526	19392	10.883	3.786
8	51354	18072	20985	10.777	3.792
9	46952	16697	22719	10.667	3.793
30	42890	15397	24620	10.560	3.791
1	39146	14166	26707	10.455	3.783
2	35698	13001	29003	10.353	3.771
3	32521	11906	31477	10.237	3.748
4	29606	10878	34308	10.157	3.732
5	26929	99159	37350	10.058	3.703
6	24472	90195	40700	9.960	3.671
7	22218	81878	44367	9.857	3.633
8	20152	74188	48409	9.755	3.591
9	18260	67101	52839	9.648	3.546
40	16528	60587	57732	9.542	3.498
1	14943	54622	63103	9.429	3.447
2	13494	49179	69044	9.317	3.396
3	12172	44229	75626	9.205	3.345
4	10966	39733	82880	9.089	3.293
5	98659	35659	90939	8.972	3.243
6	88644	31968	99844	8.851	3.192
7	79534	28635	10977	8.730	3.143
8	71252	25644	12075	8.604	3.097
9	63727	22981	13288	8.468	3.054
50	56890	20626	14627	8.321	3.017
1	50685	18556	16116	8.168	2.990
2	45054	16744	17757	8.000	2.973
3	39948	15144	19587	7.825	2.966
4	35324	13716	21623	7.638	2.968
5	31139	12430	23896	7.441	2.970
6	27358	11261	26446	7.235	2.978
7	23947	10189	29320	7.021	2.987
8	20877	91975	32577	6.801	2.996
9	18122	82752	36291	6.577	3.003
60	15656	74145	40552	6.349	3.006
1	13457	66100	45474	6.119	3.006
2	11504	58586	51196	5.890	2.999
3	97762	51611	57888	5.659	2.988
4	82556	45175	65760	5.429	2.971
5	69237	39276	75082	5.198	2.949
6	57635	33908	86191	4.968	2.923
7	47587	29057	99525	4.736	2.892
8	38942	24690	11568	4.505	2.856
9	31559	20785	13543	4.274	2.815
70	25302	17319	15983	4.044	2.768
1	20057	14274	19064	3.824	2.721
2	15703	11623	22966	3.606	2.669
3	12129	93436	27980	3.394	2.614
4	92321	78998	34524	3.187	2.555
5	69181	57700	43215	2.990	2.494
6	50945	44199	54839	2.794	2.424
7	36831	33210	70850	2.609	2.353
8	26093	24435	93131	2.430	2.276
9	18081	17585	12480	2.257	2.195
80	12229	12362	17089	2.090	2.113
1	80590	84617	23981		
2	51560	56283	34446		
3	31978	36230	51067		
4	19170	22619	78078		
5	11085	13577	12369		
6	61913	78878	20434		
7	33389	44073	35058		
8	17385	23663	62484		
9	87318	12309	11557		
90	41858	62524	21997		
1	19093	29959	43927		
2	81221	14422	91153		
3	30220	61927	19607		
4	87037	22979	46475		
5	18084	62570	14503		
6	20463	13661	62485		
7	00000	12867	48869		

DIFFERENCE OF AGE TWO YEARS,
(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D _{x:y} ⁻¹	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
18	12756	35661	93940	11.983	3.350
9	11761	34197	10054	11.825	3.438
20	10834	32636	10784	11.683	3.519
1	99710	30981	11591	11.557	3.592
2	91697	29256	12479	11.443	3.651
3	84265	27495	13455	11.338	3.699
4	77380	25732	14526	11.240	3.738
5	71009	23997	15696	11.146	3.767
6	65117	22319	16971	11.051	3.788
7	59689	20722	18356	10.953	3.804
8	54634	19206	19862	10.851	3.815
9	49983	17769	21400	10.696	3.803
30	45688	16409	23283	10.638	3.820
1	41726	15122	25240	10.532	3.817
2	38076	13902	27391	10.429	3.808
3	34715	12752	29755	10.329	3.794
4	31619	11673	32303	10.214	3.771
5	28780	10662	35216	10.135	3.755
6	26172	97195	38345	10.036	3.727
7	23779	88424	41789	9.937	3.695
8	21584	80296	45558	9.833	3.658
9	19572	72779	49714	9.730	3.618
40	17780	65856	54269	9.622	3.574
1	16043	59496	59299	9.513	3.528
2	14500	53675	64819	9.399	3.479
3	13091	48360	70928	9.285	3.430
4	11804	43522	77698	9.171	3.382
5	10629	39127	85161	9.052	3.332
6	95592	35141	93455	8.934	3.284
7	85848	31529	10262	8.810	3.236
8	76985	28285	11283	8.686	3.191
9	68926	25394	12409	8.553	3.151
50	61601	22835	13651	8.409	3.117
1	54942	20585	15019	8.252	3.092
2	48895	18620	16536	8.094	3.079
3	43404	16881	18213	7.905	3.075
4	38426	15327	20098	7.719	3.079
5	33918	13926	22180	7.523	3.089
6	29840	12649	24524	7.318	3.102
7	26158	11477	27161	7.105	3.117
8	22841	10391	30145	6.885	3.132
9	19860	93771	33542	6.661	3.145
60	17188	84270	37434	6.434	3.155
1	14803	75347	41920	6.205	3.159
2	12681	67080	47127	5.976	3.161
3	10801	59284	53203	5.746	3.154
4	91439	52062	60337	5.517	3.141
5	76896	45422	68762	5.288	3.123
6	64202	39360	78775	5.058	3.101
7	53184	33864	90764	4.827	3.074
8	43682	28900	10524	4.697	3.041
9	35544	24444	12288	4.568	3.004
70	28628	20472	14459	4.139	2.960
1	22800	16961	17158	3.912	2.910
2	17942	13895	20587	3.694	2.861
3	13937	11235	24967	3.480	2.805
4	10674	89604	30645	3.271	2.746
5	80510	70327	38126	3.070	2.681
6	59743	54302	48154	2.877	2.615
7	43539	41146	61712	2.687	2.539
8	31128	30565	80574	2.508	2.463
9	21793	22214	10712	2.334	2.380
80	14911	15783	14530	2.167	2.293
1	99492	10943	20156		
2	64627	73814	28682		
3	40714	48339	41817		
4	24837	30603	62987		
5	14629	18771	97957		
6	83021	11049	15806		
7	45471	62837	26631		
8	24008	34430	46592		
9	12214	18113	84785		
90	59699	92549	16016		
1	27675	46159	31227		
2	11987	22030	63743		
3	47540	10296	13826		
4	16061	42010	31767		
5	40519	14259	83269		
6	69997	34037	29834		
7	58665	62781	15388		
8	00000	03866	17104		

DIFFERENCE OF AGE THREE YEARS.
(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D _{x:y} ⁻¹	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
18	13508	37478	89015	12.024	3.336
9	12459	35905	95264	11.869	3.420
20	11480	34253	10217	11.729	3.499
1	10569	32535	10980	11.605	3.572
2	97231	30763	11820	11.493	3.636
3	89384	28953	12743	11.390	3.689
4	82114	27138	13756	11.296	3.733
5	75385	25350	14862	11.204	3.768
6	69162	23617	16068	11.113	3.795
7	63407	21962	17377	11.018	3.816
8	58088	20385	18800	10.921	3.832
9	53174	18886	20348	10.820	3.843
20	48635	17465	22034	10.716	3.848
1	44446	16118	23871	10.610	3.848
2	40583	14844	25887	10.506	3.843
3	37025	13639	28103	10.405	3.833
4	33750	12506	30536	10.306	3.819
5	30734	11445	33159	10.191	3.795
6	27968	10455	36155	10.012	3.780
7	25428	95321	39372	10.012	3.753
8	23098	86749	42912	9.912	3.723
9	20961	78804	46788	9.807	3.687
40	19002	71461	51060	9.702	3.649
1	17208	64702	55742	9.592	3.607
2	15566	58496	60912	9.482	3.563
3	14065	52811	66588	9.366	3.517
4	12692	47617	72871	9.249	3.470
5	11440	42888	79836	9.133	3.424
6	10297	38588	87517	9.012	3.377
7	92561	34687	96057	8.891	3.332
8	83081	31172	10548	8.763	3.288
9	74456	28036	11595	8.633	3.251
50	66611	25258	12748	8.492	3.220
1	59477	22814	14017	8.337	3.198
2	52988	20678	15411	8.166	3.187
3	47092	18791	16961	7.987	3.187
4	41738	17102	18678	7.796	3.194
5	36885	15577	20606	7.601	3.210
6	32492	14185	22762	7.396	3.229
7	28522	12906	25186	7.184	3.251
8	24941	11719	27924	6.965	3.272
9	21719	10608	31038	6.741	3.293
60	18828	95637	34598	6.514	3.309
1	16244	85787	38697	6.286	3.320
2	13942	76507	43445	6.057	3.324
3	11901	67826	48975	5.829	3.322
4	10097	59754	55454	5.599	3.314
5	85123	52303	63091	5.370	3.300
6	71262	45479	72146	5.141	3.281
7	59208	39273	82956	4.912	3.258
8	48788	33650	95974	4.682	3.230
9	39843	28584	11179	4.454	3.195
70	32220	24051	13118	4.227	3.155
1	25777	20028	15521	4.001	3.109
2	20380	16493	18529	3.776	3.056
3	15912	13416	22381	3.561	3.003
4	12255	10762	27346	3.351	2.943
5	92998	85064	33842	3.147	2.879
6	69459	66109	42483	2.951	2.809
7	51006	50492	54190	2.764	2.736
8	36757	37823	70183	2.580	2.655
9	25967	27753	92681	2.407	2.572
80	17949	19913	12472	2.239	2.484
1	12114	13954	17436		
2	79661	95343	24107		
3	50941	63316	34819		
4	31553	40785	51578		
5	18899	25367	79023		
6	10910	15262	12517		
7	60558	87939	20600		
8	32303	49046	35393		
9	16486	26334	63221		
90	83354	13604	11750		
1	39371	68199	22736		
2	17302	33827	45313		
3	69590	15604	96632		
4	24946	69115	22399		
5	73765	25685	56917		
6	15387	76722	17129		
7	19790	15115	74585		
8	14616	18964	54553		
9	00000	01289	68417		

DIFFERENCE OF AGE FOUR YEARS.
(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
19	13183	37732	90270	11·900	3·406
20	12150	35957	96805	11·762	3·481
1	11189	34139	10402	11·639	3·551
2	10296	32299	11197	11·528	3·617
3	94675	30439	12070	11·427	3·674
4	86999	28574	13028	11·334	3·723
5	79894	26734	14075	11·245	3·763
6	73321	24948	15214	11·155	3·796
7	67243	23238	16452	11·063	3·823
8	61624	21604	17898	11·029	3·867
9	56533	20045	19261	10·889	3·861
30	51737	18563	20854	10·789	3·871
1	47310	17156	22590	10·687	3·875
2	43226	15822	24482	10·583	3·874
3	39461	14563	26559	10·480	3·868
4	35993	13376	28840	10·380	3·858
5	32803	12262	31345	10·282	3·844
6	29865	11223	34042	10·167	3·821
7	27172	10254	37122	10·086	3·806
8	24698	93519	40430	9·985	3·781
9	22429	85141	44070	9·884	3·752
40	20348	77379	48053	9·778	3·718
1	18441	70210	52444	9·671	3·682
2	16695	63614	57258	9·559	3·642
3	15097	57554	62574	9·447	3·601
4	13635	51998	68413	9·328	3·557
5	12300	46921	74876	9·210	3·513
6	11081	42294	82046	9·092	3·470
7	99690	38085	89953	8·967	3·426
8	89561	34289	98730	8·842	3·385
9	80336	30891	10840	8·708	3·349
50	71941	27878	11911	8·569	3·321
1	64301	25224	13089	8·416	3·302
2	57348	22908	14382	8·248	3·294
3	51021	20853	15807	8·065	3·296
4	45272	19021	17395	7·875	3·309
5	40053	17363	19160	7·674	3·327
6	35324	15849	21147	7·470	3·352
7	31046	14455	23377	7·258	3·379
8	27185	13158	25894	7·039	3·407
9	23707	11944	28752	6·816	3·434
60	20583	10800	32015	6·590	3·458
1	17787	97170	35765	6·362	3·475
2	15293	86926	40105	6·133	3·486
3	13078	77298	45148	5·904	3·490
4	11120	68309	51047	5·676	3·487
5	93949	59981	57985	5·448	3·478
6	78843	52324	66196	5·219	3·464
7	65680	45338	75974	4·990	3·445
8	54280	38988	87719	4·761	3·420
9	44471	33249	10195	4·534	3·390
70	36092	28096	11934	4·307	3·353
1	28991	23506	14082	4·083	3·310
2	23024	19455	16761	3·859	3·261
3	18060	15908	20143	3·638	3·204
4	13980	12837	24513	3·427	3·147
5	10669	10204	30198	3·222	3·081
6	80171	79867	37710	3·023	3·012
7	59255	61396	47808	2·833	2·935
8	43028	46358	61628	2·652	2·857
9	30641	34302	80728	2·474	2·769
80	21373	24847	10790	2·306	2·681
1	14575	17584	14710		
2	96964	12142	20497		
3	62795	81681	29265		
4	39510	53355	42947		
5	24057	33768	64710		
6	14154	20600	10098		
7	80244	12136	16314		
8	43718	68573	27377		
9	22895	37478	48025		
90	11482	19759	87619		
1	54868	10010	16680		
2	24558	49832	32992		
3	10008	23873	68729		
4	36242	10374	15664		
5	11325	41804	40132		
6	27840	13613	11709		
7	42889	33891	42824		
8	45822	45548	26105		
9	00000	05892	21824		

DIFFERENCE OF AGE FIVE YEARS.
(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
20	12876	37786	91730	11·811	3·466
1	11862	35833	98558	11·691	3·532
2	10919	33887	10608	11·583	3·595
3	10044	31956	11434	11·484	3·654
4	92339	30039	12340	11·395	3·707
5	84837	28148	13330	11·309	3·752
6	77897	26310	14408	11·223	3·791
7	71477	24548	15579	11·135	3·824
8	65543	22860	16851	11·045	3·852
9	60059	21245	18234	10·951	3·874
30	54993	19703	19739	10·855	3·889
1	50315	18236	21380	10·758	3·899
2	45999	16842	23168	10·657	3·902
3	42018	15524	25118	10·554	3·899
4	38349	14284	27256	10·452	3·893
5	34971	13117	29603	10·352	3·883
6	31864	12025	32180	10·254	3·870
7	29003	11009	34954	10·138	3·848
8	26379	10061	38121	10·056	3·835
9	23971	91798	41520	9·953	3·811
40	21761	83612	45261	9·849	3·784
1	19735	76035	49358	9·741	3·753
2	17879	69039	53872	9·632	3·719
3	16179	62598	58821	9·517	3·682
4	14624	56675	64288	9·401	3·644
5	13201	51244	70295	9·280	3·602
6	11901	46276	76948	9·158	3·561
7	10716	41748	84329	9·037	3·521
8	96341	37653	92457	8·907	3·481
9	86485	33983	10146	8·775	3·448
50	77505	30718	11136	8·631	3·421
1	69328	27840	12230	8·479	3·405
2	61882	25320	13431	8·311	3·401
3	55103	23093	14752	8·129	3·407
4	48935	21102	16211	7·933	3·421
5	43330	19303	17843	7·731	3·444
6	38244	17658	19662	7·520	3·472
7	33640	16140	21718	7·308	3·505
8	29579	14727	24040	7·111	3·540
9	25828	13402	26661	6·886	3·573
60	22456	12151	29657	6·660	3·604
1	19435	10965	33095	6·432	3·629
2	16737	98385	37066	6·204	3·647
3	14337	87756	41675	5·975	3·657
4	12212	77787	47058	5·747	3·660
5	10339	68514	53377	5·519	3·657
6	86952	59955	60839	5·290	3·648
7	72607	52116	69708	5·061	3·633
8	60159	44968	80335	4·833	3·613
9	49427	38488	93178	4·606	3·586
70	40239	32650	10884	4·380	3·554
1	32433	27431	12811	4·155	3·514
2	25857	22809	15207	3·932	3·469
3	20388	18744	18285	3·728	3·427
4	15855	15204	22062	3·493	3·354
5	12161	12159	27070	3·292	3·291
6	91695	95704	33650	3·092	3·220
7	68331	74092	42437	2·900	3·144
8	49939	56306	54371	2·715	3·061
9	35832	41995	70887	2·540	2·977
80	25192	30675	93986	2·368	2·883
1	17334	21916	12727		
2	11651	15282	17594		
3	76319	10389	24894		
4	48616	68747	36097		
5	30057	44122	53882		
6	17964	27393	82690		
7	10365	16364	13161		
8	57531	94560	21681		
9	30611	52357	37148		
90	15587	28097	66558		
1	75470	14526	12438		
2	34157	73017	24205		
3	14173	35055	50041		
4	51924	15826	11135		
5	16292	62082	28065		
6	41793	21881	82558		
7	76295	58808	29271		
8	95768	10129	14988		
9	00000	13219	10442		

DIFFERENCE OF AGE SIX YEARS.
(Male the elder.)

x	N _{x'y}	N _x x'y	D ⁻¹ x'y	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _x ⁻² x'y
21	12561	37658	93391	11·731	3·517
2	11566	35567	10051	11·625	3·575
3	10643	33524	10833	11·529	3·632
4	97879	31534	11690	11·442	3·686
5	89958	29591	12626	11·358	3·736
6	82630	27701	13646	11·276	3·780
7	75852	25888	14753	11·190	3·819
8	69584	24149	15956	11·103	3·853
9	63792	22480	17264	11·013	3·881
30	58441	20883	18687	10·921	3·902
1	53499	19356	20238	10·827	3·917
2	48939	17903	21927	10·731	3·926
3	44732	16526	23770	10·633	3·928
4	40852	15228	25777	10·530	3·925
5	37278	14009	27978	10·430	3·919
6	33988	12865	30392	10·330	3·910
7	30961	11797	33041	10·230	3·898
8	28175	10703	35892	10·113	3·877
9	25621	98773	39148	10·030	3·867
40	23276	90163	42643	9·926	3·845
1	21125	82172	46491	9·821	3·820
2	19153	74777	50700	9·711	3·791
3	17346	67946	55342	9·600	3·760
4	15691	61651	60432	9·482	3·726
5	14177	55861	66058	9·365	3·690
6	12793	50548	72239	9·242	3·652
7	11528	45685	79090	9·117	3·613
8	10375	41279	86677	8·993	3·578
9	93222	37320	95015	8·857	3·546
50	83628	33794	10423	8·717	3·522
1	74882	30676	11434	8·562	3·507
2	66914	27942	12549	8·397	3·506
3	59654	25524	13775	8·217	3·516
4	53045	23361	15129	8·025	3·534
5	47031	21406	16628	7·820	3·559
6	41570	19621	18311	7·612	3·593
7	36617	17972	20193	7·394	3·629
8	32139	16434	22328	7·176	3·669
9	28098	14989	24746	6·953	3·709
60	24462	13624	27500	6·727	3·747
1	21200	12327	30657	6·499	3·779
2	18284	11093	34298	6·271	3·805
3	15688	99247	38519	6·043	3·823
4	13386	88242	43474	5·819	3·836
5	11354	77957	49205	5·587	3·836
6	95680	68427	56004	5·358	3·832
7	80072	59665	64067	5·130	3·823
8	66505	51644	73709	4·902	3·807
9	54786	44349	85334	4·675	3·784
70	44734	37757	99475	4·450	3·756
1	36174	31845	11683	4·226	3·720
2	28946	26591	13834	4·004	3·679
3	22897	21952	16532	3·783	3·629
4	17886	17896	19957	3·570	3·572
5	13782	14385	24364	3·358	3·505
6	10467	11391	30164	3·157	3·436
7	78260	88684	37867	2·963	3·358
8	57540	67874	48262	2·777	3·276
9	41550	50948	62540	2·599	3·186
80	29433	37512	82500	2·429	3·096
1	20412	27025	11085		
2	13843	19026	15222		
3	91606	13061	21358		
4	59024	87335	30692		
5	36943	56781	45288		
6	22419	35750	68853		
7	13140	21739	10777		
8	74230	12738	17491		
9	40239	72145	29420		
90	20816	39219	51484		
1	10232	20639	94483		
2	46916	10584	18049		
3	19678	51283	36713		
4	73434	23163	81075		
5	23309	94621	19950		
6	59879	32190	57733		
7	11429	93733	20639		
8	16680	17540	10245		
9	00000	29336	59953		

DIFFERENCE OF AGE SEVEN YEARS.
(Male the elder.)

x	N _{x'y}	N _x x'y	D ⁻¹ x'y	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _x ⁻² x'y
22	12247	37382	95238	11·684	3·560
3	11273	35167	10264	11·571	3·612
4	10370	33081	11075	11·485	3·664
5	95342	31064	11960	11·403	3·715
6	87605	29123	12925	11·323	3·764
7	80448	27259	13972	11·240	3·807
8	73830	25469	15110	11·156	3·848
9	67712	23749	16347	11·069	3·882
30	62060	22099	17692	10·980	3·910
1	56840	20517	19158	10·889	3·931
2	52022	19006	20756	10·798	3·945
3	47577	17570	22497	10·703	3·953
4	43478	16213	24394	10·606	3·955
5	39699	14937	26460	10·504	3·952
6	36217	13742	28724	10·403	3·947
7	33013	12623	31206	10·302	3·939
8	30065	11578	33929	10·201	3·928
9	27353	10607	36861	10·083	3·910
40	24865	97028	40207	9·997	3·901
1	22582	88622	43800	9·891	3·882
2	20488	80823	47755	9·784	3·860
3	18568	73603	52083	9·671	3·833
4	16810	66926	56858	9·558	3·805
5	15199	60773	62095	9·438	3·774
6	13726	55107	67885	9·318	3·741
7	12379	49907	74251	9·192	3·706
8	11149	45177	81292	9·063	3·673
9	10027	40917	89074	8·931	3·645
50	90020	37112	97609	8·787	3·622
1	80677	33744	10702	8·634	3·611
2	72153	30783	11732	8·465	3·611
3	64384	28160	12871	8·287	3·624
4	57306	25811	14128	8·096	3·647
5	50862	23688	15519	7·893	3·676
6	45002	21747	17065	7·680	3·711
7	39684	19958	18805	7·463	3·753
8	34868	18288	20761	7·239	3·797
9	30518	16715	22990	7·016	3·843
60	26600	15227	25525	6·790	3·887
1	23083	13811	28428	6·562	3·926
2	19935	12462	31772	6·336	3·959
3	17130	11182	35643	6·106	3·986
4	14639	99720	40149	5·877	4·004
5	12437	88365	45422	5·649	4·014
6	10500	77796	51628	5·421	4·016
7	88046	68040	58975	5·193	4·013
8	73285	59074	67745	4·965	4·002
9	60513	50883	78296	4·738	3·984
70	49536	43468	91101	4·513	3·960
1	40171	36792	10678	4·289	3·929
2	32245	30839	12617	4·068	3·891
3	25596	25566	15040	3·850	3·845
4	20074	20937	18107	3·635	3·791
5	15536	16914	22039	3·424	3·728
6	11853	13463	27148	3·218	3·655
7	89069	10545	33945	3·023	3·580
8	65848	81157	43064	2·836	3·495
9	47835	61353	55513	2·655	3·406
80	34100	45461	72811	2·483	3·310
1	23827	33013	97341		
2	16285	23435	13259		
3	10873	16242	18479		
4	70774	10967	26344		
5	44804	72050	38506		
6	27525	45955	57871		
7	16381	28341	89737		
8	93989	16906	14323		
9	51854	97091	23733		
90	27328	54002	40773		
1	13645	28785	73085		
2	63518	15019	13710		
3	26989	74250	27376		
4	10177	33837	59481		
5	32923	13801	14526		
6	85568	49072	41041		
7	16283	13638	14433		
8	24402	27727	72239		
9	00000	48685	40980		

DIFFERENCE OF AGE Eight YEARS.
(Male the elder.)

x	N _{x'y}	N _{x'y} ⁻²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
23	11937	36883	97258	11·610	3·587
4	10984	34621	10493	11·526	3·633
5	10101	32486	11331	11·445	3·681
6	92844	30471	12244	11·368	3·731
7	85288	28556	13235	11·288	3·779
8	78300	26816	14310	11·205	3·837
9	71840	25046	15480	11·121	3·877
30	65871	23346	16753	11·035	3·911
1	60358	21712	18139	10·948	3·938
2	55268	20145	19649	10·860	3·958
3	50572	18652	21295	10·769	3·972
4	46241	17237	23087	10·676	3·980
5	42247	15904	25040	10·579	3·982
6	38566	14653	27165	10·476	3·980
7	35176	13484	29493	10·374	3·977
8	32055	12391	32045	10·272	3·971
9	29185	11370	34844	10·169	3·962
40	26544	10422	37858	10·049	3·946
1	24122	95382	41298	9·962	3·939
2	21900	87180	44992	9·853	3·922
3	19861	79565	49058	9·743	3·903
4	17992	72508	53511	9·628	3·880
5	16281	65981	58423	9·512	3·855
6	14714	59961	63814	9·390	3·826
7	13281	54416	69775	9·267	3·797
8	11970	49357	76318	9·135	3·767
9	10773	44783	83540	9·000	3·741
50	96804	40689	91506	8·858	3·723
1	86826	37056	10022	8·702	3·714
2	77720	33858	10981	8·534	3·718
3	69410	31016	12033	8·352	3·732
4	61835	28468	13201	8·163	3·758
5	54934	26163	14492	7·961	3·792
6	48655	24054	15926	7·749	3·831
7	42949	22110	17526	7·527	3·875
8	37777	20297	19335	7·304	3·924
9	33099	18588	21476	7·108	3·992
60	28882	16969	23714	6·849	4·024
1	25092	15425	26387	6·621	4·070
2	21698	13953	29462	6·393	4·111
3	18669	12554	33017	6·164	4·145
4	15978	11228	37151	5·936	4·171
5	13596	99800	41982	5·708	4·190
6	11497	88132	47657	5·474	4·200
7	96580	77311	54367	5·251	4·203
8	80544	67328	62361	5·023	4·199
9	66648	58179	71961	4·796	4·187
70	54684	49852	83588	4·571	4·167
1	44459	42337	97794	4·348	4·140
2	35787	35615	11531	4·127	4·107
3	28496	29641	13716	3·909	4·066
4	22425	24379	16473	3·694	4·016
5	17424	19789	19996	3·484	3·957
6	13352	15833	24558	3·279	3·888
7	10079	12469	30551	3·079	3·809
8	74886	96598	38604	2·891	3·729
9	54699	73483	49536	2·710	3·640
80	39226	54889	64631	2·535	3·548
1	27582	40166	85878		
2	18993	28797	11642		
3	12780	20185	16096		
4	83924	13824	22892		
5	53668	92380	33051		
6	33345	60250	49205		
7	20087	38394	75424		
8	11702	24017	11926		
9	65566	14874	19435		
90	35163	92591	32892		
1	17886	39590	57880		
2	84571	20916	10605		
3	36484	10519	20895		
4	13937	48938	44352		
5	45337	20143	10657		
6	12072	71370	29882		
7	23256	20894	11433		
8	34608	40214	50517		
9	00000	76193	28895		

DIFFERENCE OF AGE Nine YEARS.
(Male the elder.)

x	N _{x'y}	N _{x'y} ²	D _{x'y} ⁻¹	Annuities.	
				Joint Lives. a _{x'y}	Rever- sionary. a _{x'y} ²
24	11630	36496	99430	11·564	3·629
5	10698	34203	10736	11·485	3·672
6	98361	32070	11600	11·410	3·720
7	90385	30082	12537	11·332	3·771
8	83007	28191	13555	11·252	3·821
9	76187	26372	14661	11·170	3·866
80	69883	24622	15865	11·088	3·907
1	64061	22938	17175	11·002	3·940
2	58686	21320	18603	10·917	3·966
3	53725	19773	20159	10·830	3·986
4	49149	18301	21854	10·741	4·000
5	44930	16911	23699	10·648	4·008
6	41040	15604	25707	10·550	4·011
7	37454	14381	27892	10·447	4·011
8	34153	13238	30285	10·343	4·009
9	31114	12169	32909	10·239	4·005
40	28320	11172	35787	10·135	3·998
1	25748	10246	38886	10·012	3·984
2	23391	93839	42421	9·923	3·981
3	21227	85829	46219	9·811	3·967
4	19243	78386	50402	9·699	3·951
5	17424	71488	54983	9·580	3·931
6	15759	65102	60040	9·462	3·909
7	14234	59210	65590	9·336	3·884
8	12840	53815	71718	9·209	3·860
9	11565	48924	78429	9·070	3·837
50	10400	44529	85821	8·925	3·822
1	93353	40619	93957	8·771	3·816
2	83628	37169	10284	8·600	3·822
3	74750	34099	11263	8·419	3·841
4	66647	31339	12341	8·225	3·868
5	59262	28838	13541	8·025	3·905
6	52538	26549	14872	7·818	3·948
7	46424	24437	16356	7·593	3·997
8	40874	22467	18019	7·365	4·048
9	35851	20613	19907	7·137	4·103
60	31316	18853	22049	6·905	4·157
1	27236	17173	24513	6·676	4·210
2	23580	15568	27346	6·448	4·257
3	20313	14041	30617	6·219	4·299
4	17408	12592	34414	5·991	4·333
5	14833	11224	38847	5·762	4·360
6	12563	99415	44047	5·534	4·379
7	10571	87469	50186	5·305	4·390
8	88310	76397	57488	5·077	4·392
9	73214	66209	66243	4·850	4·386
70	60197	56902	76824	4·625	4·371
1	49053	48470	89696	4·400	4·348
2	39583	40903	10561	4·180	4·320
3	31607	34157	12536	3·962	4·282
4	24950	28196	15022	3·748	4·236
5	19453	22977	18191	3·539	4·180
6	14965	18463	22281	3·334	4·114
7	11346	14609	27636	3·136	4·037
8	84681	11370	34744	2·942	3·950
9	62161	86963	44405	2·760	3·862
80	44821	65259	57672	2·585	3·764
1	31703	48032	76229		
2	21967	34585	10271		
3	14892	24363	14134		
4	98548	16746	19853		
5	63578	11216	28595		
6	39901	72994	42235		
7	24307	46083	64130		
8	14331	28245	10024		
9	81516	16751	16182		
90	44389	96183	26935		
1	22972	53181	46693		
2	11066	28730	83989		
3	48493	14619	16086		
4	18812	69171	33692		
5	62280	29091	79465		
6	16666	10400	21923		
7	32796	30184	74705		
8	49489	61484	85911		
9	00000	10865	20207		

DIFFERENCE OF AGE TEN YEARS.
(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D _{x:y} ⁻¹	Annuities.	
				Joint Lives.	Rever- sionary.
				a _{x:y}	a _{x:y} ²
25	11327	35952	10173	11.523	3.657
6	10417	33661	10991	11.449	3.700
7	95753	31558	11877	11.373	3.748
8	87965	29595	12840	11.295	3.800
9	80764	27726	13887	11.216	3.850
30	74109	25927	15028	11.137	3.896
1	67960	24194	16265	11.054	3.935
2	62283	22526	17615	10.971	3.968
3	57044	20928	19086	10.887	3.994
4	52210	19403	20688	10.801	4.014
5	47753	17957	22432	10.712	4.028
6	43643	16594	24390	10.645	4.047
7	39854	15316	26395	10.519	4.043
8	36363	14120	28642	10.415	4.044
9	33147	13003	31102	10.309	4.044
40	30189	11959	33799	10.204	4.042
1	27468	10985	36758	10.097	4.038
2	24965	10081	39943	9.972	4.027
3	22670	92398	43580	9.880	4.027
4	20564	84570	47486	9.765	4.016
5	18633	77295	51789	9.650	4.003
6	16864	70545	56505	9.529	3.986
7	15243	64295	61711	9.407	3.968
8	13760	58562	67416	9.276	3.948
9	12408	53347	73701	9.141	3.932
50	11162	48446	80570	8.993	3.919
1	10027	44449	88119	8.836	3.917
2	89897	40736	96408	8.667	3.927
3	80417	37425	10548	8.482	3.947
4	71760	34443	11552	8.290	3.979
5	63860	31784	12659	8.084	4.017
6	56664	29251	13896	7.874	4.065
7	50117	26958	15274	7.653	4.118
8	44170	24818	16816	7.428	4.173
9	38780	22803	18552	7.194	4.230
60	33910	20893	20534	6.963	4.290
1	29523	19068	22793	6.729	4.346
2	25587	17321	25405	6.500	4.400
3	22068	15656	28418	6.271	4.449
4	18934	14074	31912	6.042	4.491
5	16155	12579	35985	5.813	4.527
6	13702	11174	40758	5.585	4.554
7	11546	98609	46384	5.355	4.574
8	96614	86386	53067	5.127	4.584
9	80238	75087	61065	4.900	4.585
70	66097	64724	70718	4.674	4.577
1	53971	55299	82467	4.451	4.560
2	43651	46807	96896	4.230	4.535
3	34941	39214	11481	4.012	4.502
4	27657	32483	13730	3.797	4.460
5	21630	26571	16590	3.588	4.408
6	16696	21439	20270	3.384	4.345
7	12708	17041	25074	3.186	4.273
8	95264	13329	31439	2.995	4.191
9	70242	10247	39965	2.807	4.095
80	50899	77365	51698	2.631	4.000
1	36198	57258	68022		
2	25230	41525	91174		
3	17210	29435	12469		
4	11474	20394	17433		
5	74587	13773	24907		
6	47221	90499	36540		
7	29054	57694	55045		
8	17321	35730	85228		
9	99684	21468	12755		
90	55096	12500	22427		
1	28942	70372	38235		
2	14183	38510	67756		
3	63331	20043	12739		
4	24960	95904	26061		
5	83939	41031	60364		
6	22767	15014	16347		
7	45208	44048	54807		
8	69617	88982	26147		
9	00000	16873	14364		

DIFFERENCE OF AGE ELEVEN YEARS.
(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D _{x:y} ⁻¹	Annuities.	
				Joint Lives.	Rever- sionary.
				a _{x:y}	a _{x:y} ²
26	11029	35384	10415	11.487	3.685
7	10141	33124	11254	11.413	3.728
8	93186	31047	12165	11.336	3.777
9	85584	29107	13155	11.259	3.829
30	78558	27259	14232	11.180	3.880
1	72066	25477	15404	11.101	3.924
2	66071	23761	16682	11.022	3.964
3	60538	22114	18073	10.941	3.997
4	55433	20539	19587	10.858	4.023
5	50724	19040	21236	10.772	4.043
6	46382	17623	23030	10.682	4.059
7	42379	16289	24982	10.587	4.069
8	38689	15040	27105	10.487	4.076
9	35290	13871	29414	10.380	4.080
40	32159	12780	31944	10.273	4.082
1	29279	11760	34716	10.164	4.083
2	26630	10811	37759	10.055	4.082
3	24193	99280	41034	9.927	4.074
4	21960	91055	44774	9.832	4.077
5	19910	83402	48793	9.715	4.069
6	18031	76284	53222	9.596	4.060
7	16310	69673	58078	9.473	4.047
8	14733	63597	63429	9.345	4.034
9	13290	58054	69280	9.207	4.022
50	11969	53043	75713	9.062	4.016
1	10760	48553	82727	8.901	4.017
2	96541	44567	90418	8.729	4.030
3	86428	41004	98884	8.546	4.055
4	77184	37788	10818	8.350	4.088
5	68745	34862	11849	8.146	4.131
6	61047	32172	12991	7.931	4.179
7	54040	29684	14271	7.712	4.236
8	47672	27360	15703	7.486	4.296
9	41896	25171	17314	7.254	4.358
60	36671	23096	19136	7.017	4.420
1	31960	21116	21226	6.784	4.482
2	27726	19218	23622	6.549	4.540
3	23939	17406	26401	6.320	4.595
4	20563	15681	29620	6.091	4.645
5	17566	14049	33369	5.862	4.688
6	14917	12513	37756	5.632	4.724
7	12587	11075	42921	5.402	4.754
8	10548	97311	49037	5.172	4.772
9	87744	84837	56369	4.946	4.782
70	72405	73343	65192	4.720	4.781
1	59232	62848	75913	4.496	4.771
2	48004	53357	89056	4.275	4.752
3	38511	44836	10534	4.057	4.723
4	30558	37258	12575	3.843	4.685
5	23963	30583	15163	3.635	4.637
6	18554	24770	18486	3.430	4.579
7	14170	19769	22811	3.232	4.510
8	10663	15534	28516	3.041	4.430
9	78969	12002	36152	2.855	4.339
80	57477	91077	46529	2.674	4.238
1	41077	67820	60976		
2	28785	49456	81357		
3	19751	35310	11068		
4	13249	24617	15380		
5	86765	16757	21871		
6	55346	11102	31828		
7	30348	71463	47624		
8	20678	44689	73155		
9	12031	27129	11565		
90	67262	16002	18850		
1	35852	91840	31837		
2	17829	50863	55483		
3	80984	26800	10277		
4	32553	13121	20639		
5	11117	56732	46693		
6	30638	21113	12418		
7	61692	63466	40868		
8	95615	12949	19182		
9	00000	24036	10459		

DIFFERENCE OF AGE Twelve YEARS.

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
27	10736	34821	10664	11.449	3.713
8	98684	32590	11526	11.374	3.756
9	90660	30537	12463	11.299	3.806
30	83243	28618	13482	11.223	3.858
1	76389	26788	14591	11.146	3.909
2	70060	25024	15799	11.069	3.954
3	64217	23328	17115	10.991	3.993
4	58825	21705	18547	10.910	4.026
5	53851	20157	20106	10.827	4.053
6	49265	18688	21802	10.741	4.074
7	45036	17302	23647	10.650	4.091
8	41138	15998	25653	10.553	4.104
9	37545	14777	27836	10.451	4.113
40	34235	13635	30210	10.342	4.119
1	31187	12570	32811	10.233	4.124
2	28383	11575	35661	10.122	4.128
3	25805	10648	38788	10.009	4.130
4	23433	97850	42158	9.879	4.125
5	21259	89810	46006	9.780	4.132
6	19265	82322	50143	9.660	4.128
7	17437	75355	54704	9.539	4.122
8	15762	68928	59694	9.409	4.115
9	14228	63049	65183	9.274	4.110
50	12823	57723	71172	9.126	4.108
1	11536	52936	77741	8.968	4.115
2	10358	48673	84886	8.792	4.132
3	92799	44848	92739	8.606	4.159
4	82938	41387	10141	8.410	4.197
5	73926	38230	11096	8.203	4.242
6	65703	35325	12160	7.989	4.296
7	58208	32629	13342	7.766	4.353
8	51392	30109	14673	7.541	4.418
9	45207	27732	16169	7.310	4.484
60	39608	25477	17859	7.074	4.550
1	34553	23326	19782	6.835	4.614
2	30007	21266	21998	6.601	4.678
3	25933	19297	24548	6.366	4.737
4	22299	17421	27518	6.136	4.794
5	19071	15642	30973	5.907	4.845
6	16214	13965	35011	5.677	4.889
7	13699	12392	39760	5.447	4.927
8	11496	10920	45385	5.217	4.956
9	95766	95487	52099	4.989	4.975
70	79148	82798	60178	4.763	4.983
1	64859	71158	69981	4.539	4.980
2	52660	60590	81978	4.317	4.967
3	42331	51066	96817	4.098	4.944
4	33664	42563	11538	3.884	4.911
5	26463	35049	13886	3.675	4.867
6	20544	28485	16896	3.471	4.813
7	15737	22820	20803	3.274	4.747
8	11882	18005	25942	3.083	4.671
9	88336	13974	32800	2.897	4.583
80	64577	10658	42089	2.718	4.486
1	46355	79767	54879		
2	32643	58526	72929		
3	22518	42015	98765		
4	15193	29504	13652		
5	10011	20208	19296		
6	64326	13496	27948		
7	40219	87592	41482		
8	24419	55305	63292		
9	14345	33899	99264		
90	81055	20199	16027		
1	43685	11677	26759		
2	22039	65887	46199		
3	10156	35317	84155		
4	41504	17492	16650		
5	14461	77459	36979		
6	40506	29115	96055		
7	82944	88985	31045		
8	13033	18670	14304		
9	00000	35150	76730		

DIFFERENCE OF AGE Thirteen YEARS.

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
28	10447	34261	10923	11.411	3.742
9	96006	32056	11809	11.337	3.785
30	88176	30026	12773	11.263	3.835
1	80941	28125	13822	11.188	3.887
2	74259	26313	14965	11.113	3.938
3	68090	24570	16209	11.037	3.983
4	62396	22900	17564	10.959	4.022
5	57144	21304	19038	10.879	4.056
6	52299	19787	20642	10.796	4.084
7	47832	18350	22366	10.708	4.108
8	43714	16995	24282	10.615	4.127
9	39918	15721	26345	10.516	4.142
40	36420	14528	28589	10.412	4.153
1	33197	13413	31030	10.301	4.162
2	30230	12374	33703	10.188	4.170
3	27501	11402	36621	10.071	4.176
4	24991	10496	39852	9.959	4.183
5	22683	96526	43318	9.826	4.181
6	20568	88658	47279	9.724	4.192
7	18627	81331	51539	9.600	4.192
8	16849	74552	56227	9.474	4.192
9	15219	68338	61845	9.336	4.192
50	13725	62689	66963	9.190	4.198
1	12357	57602	73078	9.030	4.209
2	11103	53056	79768	8.857	4.232
3	99549	48965	87063	8.667	4.263
4	89035	45249	95112	8.468	4.304
5	79422	41853	10402	8.261	4.354
6	70640	38718	11367	8.044	4.409
7	62633	35807	12488	7.822	4.472
8	55343	33077	13718	7.592	4.538
9	48724	30499	15107	7.361	4.607
60	42727	28050	16677	7.126	4.678
1	37811	25712	18462	6.888	4.747
2	32433	23475	20501	6.649	4.813
3	28059	21338	22861	6.415	4.878
4	24150	19299	25587	6.179	4.938
5	20675	17363	28774	5.949	4.996
6	17598	15535	32497	5.719	5.048
7	14886	13818	36869	5.488	5.095
8	12507	12209	42042	5.258	5.133
9	10433	10707	48209	5.030	5.162
70	86347	93119	55620	4.803	5.179
1	70867	80269	64599	4.578	5.185
2	57635	68548	75572	4.356	5.180
3	46414	57943	89122	4.137	5.164
4	36984	48438	10604	3.922	5.136
5	29135	40006	12741	3.712	5.097
6	22672	32617	15474	3.508	5.047
7	17413	26220	19013	3.311	4.985
8	13186	20766	23658	3.120	4.913
9	98349	16183	29840	2.935	4.829
80	72162	12399	38287	2.763	4.747
1	52048	93266	49643		
2	36813	68777	65637		
3	25518	49679	88535		
4	17309	35076	12182		
5	11471	24199	17128		
6	74154	16260	24657		
7	46701	10638	36425		
8	28561	67719	55129		
9	16917	41906	85881		
90	96483	25205	13757		
1	52531	14712	22752		
2	26798	83982	38830		
3	12527	45640	70072		
4	51927	22995	13634		
5	18405	10295	29831		
6	52594	39681	76070		
7	10951	12242	24014		
8	17478	26147	10866		
9	00000	50517	57215		

DIFFERENCE OF AGE Fourteen YEARS.
(Male the elder.)

x	N _{x·y}	N _{x·y} ²	D _{x·y} ⁻¹	Annuities.	
				Joint Lives. a _{x·y}	Rever- sionary. a _{x·y} ²
29	10164	83706	11190	11·874	3·772
30	93874	31525	12102	11·800	3·815
1	85737	29514	13095	11·227	3·865
2	78683	27632	14176	11·154	3·917
3	72170	25842	15353	11·080	3·968
4	66158	24125	16635	11·005	4·013
5	60612	22483	18029	10·928	4·053
6	55495	20919	19546	10·847	4·089
7	50777	19435	21195	10·762	4·119
8	46427	18030	22987	10·672	4·145
9	42417	16706	24937	10·578	4·166
40	88721	15461	27058	10·477	4·183
1	85316	14296	29364	10·370	4·198
2	82178	13209	31874	10·256	4·210
3	79290	12194	34622	10·141	4·222
4	76633	11244	37638	10·024	4·232
5	74191	10355	40948	9·906	4·240
6	71945	95303	44516	9·769	4·243
7	69887	87603	48395	9·664	4·257
8	67999	80473	52974	9·535	4·263
9	66268	73920	57782	9·400	4·271
50	14682	67949	63020	9·253	4·282
1	13227	62553	68756	9·094	4·301
2	11894	57723	74984	8·919	4·328
3	10671	53360	81817	8·731	4·366
4	95515	49386	89293	8·529	4·410
5	85265	45739	97561	8·318	4·462
6	75898	42367	10675	8·102	4·523
7	67347	39226	11695	7·876	4·587
8	59558	36277	12840	7·647	4·658
9	52478	33484	14124	7·412	4·729
60	46061	30828	15583	7·178	4·804
1	40261	28290	17240	6·941	4·877
2	35034	25859	19133	6·703	4·948
3	30340	23537	21305	6·464	5·015
4	26144	21324	23828	6·230	5·081
5	22386	19221	26612	5·957	5·115
6	19073	17232	30190	5·758	5·202
7	16151	15360	34221	5·527	5·256
8	13586	13603	38985	5·297	5·303
9	11347	11961	44658	5·067	5·342
70	94039	10433	51733	4·865	5·397
1	77291	90202	59700	4·614	5·385
2	62956	77262	69760	4·392	5·389
3	50784	65500	82158	4·172	5·381
4	40539	54917	97611	3·957	5·361
5	32000	45491	11711	3·748	5·327
6	24956	37200	14197	3·543	5·281
7	19213	30000	17413	3·346	5·224
8	14589	23840	21623	3·155	5·155
9	10914	18649	27213	2·970	5·075
80	80355	14347	34740	2·792	4·984
1	58152	10841	45041		
2	41310	80352	59375		
3	28760	58334	79683		
4	19603	41443	10920		
5	13060	28747	15284		
6	84912	19457	21887		
7	53794	12808	32136		
8	33137	82190	48409		
9	19769	51283	74805		
90	11367	31144	11902		
1	62467	18353	19529		
2	32178	10579	39015		
3	15199	58103	58896		
4	63910	29635	11353		
5	22973	13501	24428		
6	66782	52565	61368		
7	14199	16657	19018		
8	23008	35913	34048		
9	00000	70315	43462		

DIFFERENCE OF AGE Fifteen YEARS.
(Male the elder.)

x	N _{x·y}	N _{x·y} ²	D _{x·y} ⁻¹	Annuities.	
				Joint Lives. a _{x·y}	Rever- sionary. a _{x·y} ²
30	98843	33147	11467	11·334	3·801
1	90783	30987	12407	11·263	3·845
2	83337	28996	13430	11·192	3·894
3	76462	27137	14544	11·121	3·947
4	70115	25373	15756	11·047	3·998
5	64259	23685	17075	10·972	4·044
6	58856	22076	18510	10·894	4·086
7	53873	20546	20069	10·812	4·123
8	49278	19096	21764	10·725	4·156
9	45042	17723	23607	10·633	4·184
40	41138	16429	25612	10·536	4·208
1	37540	15214	27792	10·433	4·228
2	34224	14077	30163	10·323	4·246
3	31170	13015	32744	10·206	4·262
4	28359	12023	35571	10·088	4·277
5	25773	11095	38647	9·960	4·288
6	23397	10228	42081	9·846	4·304
7	21212	94202	45756	9·706	4·310
8	19210	86711	49948	9·595	4·331
9	17373	79818	54439	9·458	4·345
50	15688	73521	59360	9·312	4·364
1	14143	67817	64708	9·152	4·388
2	12725	62694	70550	8·977	4·423
3	11425	58058	76910	8·787	4·465
4	10233	53820	83910	8·587	4·516
5	91413	49920	91593	8·373	4·572
6	81425	46299	10012	8·152	4·635
7	72304	42020	10964	7·927	4·607
8	63988	39738	12024	7·694	4·778
9	56423	36721	13220	7·459	4·855
60	49559	33844	14568	7·220	4·930
1	45351	31091	16109	6·983	5·008
2	37754	28451	17867	6·746	5·083
3	32725	25929	19883	6·507	5·155
4	28222	23525	22206	6·267	5·224
5	24208	21242	24916	6·032	5·293
6	20646	19080	28071	5·796	5·356
7	17500	17044	31791	5·563	5·418
8	14737	15129	36185	5·333	5·474
9	12322	13336	41411	5·103	5·523
70	10224	11665	47676	4·874	5·561
1	84144	10118	55248	4·649	5·590
2	68635	86755	64476	4·425	5·594
3	55449	73770	75840	4·205	5·595
4	44336	62033	89984	3·990	5·582
5	35059	51538	10779	3·779	5·555
6	27395	42270	13049	3·575	5·516
7	21136	34190	15977	3·377	5·463
8	16087	27257	19803	3·186	5·398
9	12066	21395	24872	3·001	5·321
80	89096	16521	31682	2·823	5·234
1	64691	12535	40975		
2	46128	93333	53871		
3	32255	68104	72080		
4	22080	48630	98283		
5	14781	33946	13700		
6	96607	23104	19530		
7	61550	15324	28517		
8	38135	98966	42708		
9	22912	62281	65687		
90	13266	33168	10367		
1	73475	22744	16896		
2	38187	13267	28339		
3	18218	72957	50076		
4	77381	37634	95421		
5	28218	17350	20340		
6	83179	68772	50252		
7	17998	21982	15342		
8	29745	48825	66561		
9	00000	96269	33610		

DIFFERENCE OF AGE Sixteen YEARS.

(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D ⁻¹ _{x:y}	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
31	96099	32585	11757	11·298	3·831
2	88240	30446	12725	11·229	3·874
3	80983	28479	13779	11·159	3·924
4	74283	26648	14926	11·087	3·977
5	68100	24914	16174	11·014	4·030
6	62396	23259	17530	10·938	4·077
7	57134	21685	19005	10·858	4·121
8	52282	20190	20608	10·774	4·161
9	47807	18772	22351	10·685	4·196
40	43683	17431	24246	10·591	4·226
1	39882	16167	26307	10·492	4·253
2	36379	14982	28548	10·385	4·277
3	33152	13872	30987	10·273	4·299
4	30179	12834	33641	10·153	4·317
5	27443	11864	36550	10·030	4·336
6	24927	10956	39744	9·907	4·354
7	22615	10107	43253	9·782	4·372
8	20489	93215	47029	9·636	4·384
9	18541	85972	51829	9·517	4·413
50	16752	79348	56176	9·411	4·457
1	15112	73333	60950	9·211	4·470
2	13606	67918	66397	9·034	4·510
3	12224	63000	72361	8·845	4·559
4	10956	58497	78865	8·640	4·613
5	97940	54339	86071	8·430	4·677
6	87301	50466	93996	8·206	4·744
7	77576	46838	10283	7·977	4·816
8	68705	43414	11272	7·744	4·894
9	60627	40160	12300	7·457	4·940
60	53294	37052	13636	7·267	5·052
1	46654	34069	15060	7·026	5·131
2	40664	31206	16694	6·788	5·210
3	35278	28467	18567	6·550	5·285
4	30453	25855	20724	6·311	5·358
5	26146	23375	23220	6·071	5·428
6	22321	21029	26142	5·835	5·497
7	18938	18816	29560	5·598	5·562
8	15963	16732	33617	5·366	5·625
9	13362	14778	38438	5·136	5·680
70	11100	12954	44210	4·896	5·714
1	91458	11262	51179	4·681	5·764
2	74697	97041	59662	4·457	5·790
3	60430	82768	70097	4·236	5·802
4	48391	69810	83063	4·020	5·799
5	38328	58170	99371	3·809	5·780
6	30002	47851	12011	3·604	5·747
7	23192	38819	14684	3·406	5·700
8	17689	31039	18170	3·214	5·640
9	13299	24441	22779	3·029	5·567
80	98452	18937	28957	2·851	5·484
1	71692	14422	37368		
2	51287	10782	49009		
3	35996	79028	65398		
4	24748	56714	88905		
5	16638	39785	12331		
6	10926	27244	17507		
7	69977	18163	25454		
8	43599	11813	37910		
9	26343	74738	57951		
90	15358	46117	91036		
1	85636	27650	14717		
2	44850	16222	24516		
3	21585	90644	42983		
4	92589	47151	81131		
5	34097	21983	17096		
6	10198	88159	41843		
7	22379	28717	12563		
8	37559	64363	53697		
9	00000	18066	26625		

DIFFERENCE OF AGE Seventeen YEARS.

(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D ⁻¹ _{x:y}	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
32	93403	32022	12058	11·263	3·861
3	85744	29909	13055	11·194	3·905
4	78672	27971	14141	11·125	3·955
5	72145	26171	15321	11·053	4·010
6	66122	24471	16605	10·980	4·063
7	60567	22853	18000	10·902	4·114
8	55443	21314	19516	10·820	4·160
9	50718	19853	21164	10·734	4·202
40	46361	18468	22956	10·643	4·240
1	42346	17158	24904	10·546	4·273
2	38645	15925	27022	10·443	4·303
3	35236	14768	29326	10·333	4·331
4	32094	13683	31835	10·217	4·356
5	29202	12668	34566	10·094	4·379
6	26539	11719	37562	9·969	4·402
7	24091	10830	40850	9·841	4·424
8	21842	10005	44456	9·710	4·448
9	19773	92450	48330	9·556	4·468
50	17876	85491	52731	9·426	4·508
1	16135	79164	57422	9·265	4·546
2	14536	73453	62539	9·091	4·594
3	13067	68255	68101	8·899	4·648
4	11720	63479	74213	8·698	4·711
5	10484	59060	80909	8·482	4·778
6	93519	54930	88330	8·261	4·852
7	83160	51050	96535	8·028	4·928
8	73701	47374	10572	7·791	5·008
9	65085	43872	11606	7·554	5·092
60	57254	40520	12770	7·311	5·174
1	50160	37298	14096	7·071	5·258
2	43753	34196	15607	6·829	5·337
3	37981	31225	17349	6·589	5·417
4	32821	28389	19353	6·352	5·494
5	28207	25695	21670	6·112	5·568
6	24102	23146	24363	5·872	5·639
7	20470	20744	27529	5·635	5·711
8	17270	18480	31257	5·398	5·776
9	14470	16353	35709	5·167	5·839
70	12033	14365	41034	4·938	5·895
1	99258	12518	47457	4·710	5·941
2	81164	10815	55267	4·486	5·977
3	65746	92509	64861	4·264	6·000
4	52721	78266	76772	4·047	6·009
5	41819	65416	91729	3·836	6·001
6	32788	53971	11073	3·631	5·976
7	25390	43915	13517	3·432	5·936
8	19402	35219	16700	3·240	5·882
9	14617	27815	20900	3·055	5·813
80	10846	2·620	26520	2·876	5·734
1	79183	16521	34154		
2	56809	12397	44694		
3	40001	91237	59495		
4	27604	65773	80663		
5	18638	46375	11154		
6	12292	31916	15757		
7	79093	21412	22817		
8	49582	14000	33828		
9	30092	89236	51440		
90	17641	55383	80315		
1	99029	33463	12381		
2	52203	19780	21356		
3	25513	11149	37187		
4	10953	58468	69639		
5	40733	27480	14536		
6	12299	11143	35169		
7	27398	36700	10417		
8	46558	83942	45993		
9	00000	17099	21479		

DIFFERENCE OF AGE Eighteen YEARS.

(Male the elder.)

x	$N_{x'y}$	$N_{\frac{x}{2}y}$	$D_{x'y}^{-1}$	Annuities.	
				Joint Lives. $a_{x'y}$	Rever- sionary. $a_{\frac{x}{2}y}$
33	90757	31461	12371	11·228	3·892
4	83293	29380	13398	11·160	3·936
5	76404	27475	14515	11·090	3·988
6	70046	25710	15729	11·018	4·044
7	64181	24048	17049	10·942	4·100
8	58770	22466	18483	10·862	4·152
9	53781	20962	20042	10·779	4·201
40	49180	19534	21737	10·690	4·246
1	44939	18182	23579	10·596	4·287
2	41030	16904	25581	10·496	4·324
3	37428	15700	27760	10·390	4·358
4	34109	14569	30130	10·277	4·390
5	31052	13508	32712	10·158	4·419
6	28237	12515	35523	10·031	4·446
7	25647	11587	38607	9·902	4·473
8	23265	10722	41987	9·768	4·502
9	21076	99235	45686	9·629	4·630
50	19063	91937	49650	9·464	4·565
1	17215	85290	54143	9·321	4·618
2	15518	79282	58921	9·143	4·671
3	13959	73801	64145	8·954	4·734
4	12527	68752	69843	8·749	4·802
5	11213	64065	76124	8·536	4·877
6	10009	59677	83032	8·311	4·955
7	89067	55539	90715	8·080	5·038
8	78992	51608	99251	7·840	5·122
9	69805	47848	10885	7·598	5·208
60	61452	44241	11971	7·356	5·296
1	53876	40765	13201	7·112	5·381
2	47031	37415	14609	6·871	5·466
3	40866	34196	16219	6·628	5·546
4	35336	31120	18083	6·390	5·627
5	30394	28194	20236	6·151	5·705
6	25996	25425	22737	5·911	5·781
7	22098	22815	25655	5·669	5·853
8	18663	20358	29109	5·433	5·926
9	15651	18047	33202	5·196	5·992
70	13028	15884	38121	4·966	6·055
1	10757	13871	44049	4·738	6·110
2	88062	12011	51249	4·513	6·156
3	71418	10302	60084	4·291	6·190
4	57342	87410	71039	4·074	6·210
5	45546	73285	84780	3·861	6·213
6	35763	60650	10221	3·655	6·199
7	27738	49497	12461	3·456	6·168
8	21232	39814	15372	3·264	6·120
9	16026	31538	19209	3·078	6·058
80	11917	24586	24332	2·900	5·982
1	87197	18847	31279		
2	62717	14190	40850		
3	44286	10482	54258		
4	30659	75871	73383		
5	20778	53734	10120		
6	13762	37167	14253		
7	88923	25067	20536		
8	55946	16494	30324		
9	34160	10568	45902		
90	20133	66076	71292		
1	11362	40149	11401		
2	60296	23907	18753		
3	29424	13573	32391		
4	12826	71793	60250		
5	48115	34018	12477		
6	14673	13903	29903		
7	32999	46306	87913		
8	56856	10720	36613		
9	00000	22281	17588		

DIFFERENCE OF AGE Nineteen YEARS.

(Male the elder.)

x	$N_{x'y}$	$N_{\frac{x}{2}y}$	$D_{x'y}^{-1}$	Annuities.	
				Joint Lives. $a_{x'y}$	Rever- sionary. $a_{\frac{x}{2}y}$
34	88158	30909	12696	11·193	3·924
5	80887	28863	13753	11·124	3·970
6	74177	26996	14900	11·052	4·022
7	67985	25269	16151	10·980	4·081
8	62273	23644	17507	10·902	4·139
9	57005	22098	18982	10·821	4·195
40	52147	20629	20584	10·734	4·246
1	47668	19235	22326	10·642	4·294
2	43539	17915	24220	10·545	4·339
3	39734	16668	26280	10·442	4·380
4	36227	15491	28520	10·332	4·418
5	32997	14385	30960	10·216	4·454
6	30023	13347	33617	10·093	4·487
7	27284	12376	36512	9·962	4·519
8	24764	11472	39682	9·827	4·552
9	22446	10636	43148	9·685	4·589
50	20316	98690	46934	9·535	4·632
1	18354	91719	50979	9·357	4·676
2	16554	85407	55556	9·197	4·745
3	14899	79641	60434	9·004	4·813
4	13379	74317	65786	8·802	4·889
5	11983	69362	71642	8·585	4·969
6	10703	64708	78121	8·361	5·055
7	95307	60311	85274	8·127	5·143
8	84585	56119	93267	7·889	5·234
9	74799	52098	10219	7·644	5·324
60	65892	48225	11228	7·398	5·415
1	57812	44485	12375	7·154	5·505
2	50502	40871	13680	6·909	5·591
3	43915	37394	15181	6·667	5·677
4	38000	34062	16906	6·424	5·759
5	32711	30888	18908	6·185	5·840
6	28002	27881	21232	5·945	5·920
7	23825	25046	23943	5·704	5·997
8	20139	22376	27128	5·463	6·070
9	16905	19869	30921	5·227	6·144
70	14083	17518	35446	4·992	6·209
1	11640	15327	40923	4·763	6·272
2	95375	13300	47568	4·537	6·327
3	77427	11433	55715	4·314	6·370
4	62231	97275	65807	4·095	6·401
5	49484	81799	78450	3·882	6·417
6	38898	67910	94471	3·675	6·416
7	30205	55597	11502	3·474	6·395
8	23148	44857	14171	3·280	6·357
9	17493	35642	17682	3·093	6·302
80	13021	27871	22363	2·912	6·233
1	95365	21431	28699		
2	69035	16189	37979		
3	48870	12002	49591		
4	33928	87127	66923		
5	23066	61962	92067		
6	15333	43056	12932		
7	99499	29180	18576		
8	62858	19296	27292		
9	38555	12442	41147		
90	22836	78192	63616		
1	12955	47857	10120		
2	69104	28647	16544		
3	33946	16381	28443		
4	14891	87257	52479		
5	56270	41704	10795		
6	17309	17183	25667		
7	39324	57661	74757		
8	68282	13507	30773		
9	00000	28306	14645		

DIFFERENCE OF AGE Twenty YEARS.

(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D ⁻¹ _{x:y}	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
35	85609	30368	13032	11.157	3.958
6	78526	28363	14119	11.087	4.005
7	71991	26537	15301	11.015	4.060
8	65961	24849	16585	10.940	4.121
9	60399	23261	17979	10.858	4.182
40	55270	21751	19495	10.775	4.240
1	50540	20316	21143	10.686	4.295
2	46180	18956	22939	10.593	4.348
3	42161	17667	24881	10.490	4.396
4	38457	16448	26999	10.383	4.441
5	35045	15298	29305	10.270	4.483
6	31902	14215	31817	10.150	4.523
7	29007	13200	34552	10.022	4.561
8	26343	12254	37528	9.886	4.599
9	23891	11381	40780	9.743	4.641
50	21635	10577	44326	9.590	4.688
1	19559	98448	48190	9.425	4.744
2	17648	91829	52309	9.231	4.803
3	15893	85771	56982	9.056	4.867
4	14279	80171	61980	8.850	4.969
5	12797	74946	67480	8.635	5.057
6	11437	70026	73522	8.409	5.148
7	10191	65362	80231	8.176	5.244
8	90503	60908	87673	7.935	5.340
9	80089	56620	96030	7.691	5.437
60	70602	52478	10541	7.442	5.532
1	61986	48463	11606	7.194	5.625
2	54189	44573	12825	6.950	5.716
3	47155	40823	14217	6.704	5.804
4	40836	37224	15824	6.462	5.890
5	35179	33785	17677	6.219	5.972
6	30138	30524	19839	5.979	6.056
7	25666	27446	22359	5.739	6.137
8	21716	24545	25317	5.498	6.214
9	18245	21820	28816	5.257	6.288
70	15216	19269	33010	5.023	6.361
1	12588	16888	38050	4.790	6.426
2	10325	14682	44191	4.563	6.488
3	83914	12648	51714	4.340	6.541
4	67527	10786	61022	4.121	6.582
5	53766	90939	72672	3.907	6.609
6	42327	75722	87416	3.700	6.619
7	32921	62187	10631	3.500	6.611
8	25276	50331	13081	3.306	6.584
9	19141	40110	16300	3.120	6.538
80	14284	31458	20586	2.941	6.476
1	10492	24259	26377		
2	75790	18377	34325		
3	53772	13664	45416		
4	37423	99610	61167		
5	25513	71100	83962		
6	17013	49609	11765		
7	11080	33774	16854		
8	70293	22449	24688		
9	43290	14547	37033		
90	25754	91992	57026		
1	14681	56585	90306		
2	78711	34109	14686		
3	38861	19601	25093		
4	17160	10514	46082		
5	65251	50603	94026		
6	20219	21034	22206		
7	46343	71171	64167		
8	81240	16805	26165		
9	00000	35586	12309		

DIFFERENCE OF AGE Twenty-one YEARS.

(Male the elder.)

x	N _{x:y}	N _{x:y} ²	D ⁻¹ _{x:y}	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
36	83106	29855	13379	11.119	3.994
7	76208	27893	14497	11.048	4.044
8	69844	26108	15712	10.974	4.102
9	63972	24459	17032	10.896	4.166
40	58557	22907	18466	10.813	4.230
1	53563	21433	20024	10.725	4.292
2	48959	20033	21718	10.633	4.351
3	44714	18705	23559	10.534	4.407
4	40802	17445	25563	10.430	4.459
5	37197	16253	27742	10.319	4.509
6	33877	15128	30118	10.202	4.556
7	30819	14069	32702	10.078	4.601
8	28003	13081	35514	9.945	4.646
9	25410	12166	38567	9.800	4.692
50	23023	11327	41894	9.645	4.745
1	20826	10560	45514	9.478	4.806
2	18804	98641	49448	9.298	4.878
3	16940	92288	53652	9.089	4.951
4	15229	86303	58440	8.900	5.044
5	13656	80807	63676	8.682	5.137
6	12212	75619	69251	8.457	5.237
7	10888	70690	75508	8.221	5.338
8	96752	65965	82488	7.981	5.441
9	85675	61408	90271	7.734	5.543
60	75579	56992	99053	7.486	5.645
1	66402	52698	10896	7.235	5.742
2	58088	48529	12028	6.987	5.836
3	50585	44486	13328	6.742	5.929
4	43837	40603	14818	6.496	6.017
5	37793	36889	16546	6.253	6.104
6	32401	33356	18547	6.009	6.187
7	27614	30017	20891	5.769	6.271
8	23385	26867	23642	5.529	6.352
9	19666	23907	26893	5.289	6.429
70	16416	21135	30764	5.050	6.502
1	13594	18552	35435	4.817	6.574
2	11160	16154	41090	4.586	6.638
3	90785	13941	48043	4.362	6.698
4	73130	11921	56640	4.142	6.752
5	58290	10074	67388	3.928	6.789
6	45941	84105	80979	3.720	6.811
7	35776	69276	98374	3.519	6.815
8	27505	56243	12090	3.325	6.800
9	20859	44960	15047	3.139	6.765
80	15589	35391	18977	2.958	6.716
1	11471	27375	24281		
2	83010	20800	31548		
3	59012	15512	41670		
4	41161	11343	56018		
5	28130	81240	76739		
6	18809	56892	10729		
7	12288	38891	15333		
8	78231	25967	22399		
9	48380	16912	33499		
90	28896	10747	51324		
1	16543	66519	80952		
2	89115	40285	13104		
3	44221	23310	22274		
4	19624	12563	40655		
5	75121	60887	82564		
6	23421	25483	19342		
7	54081	86997	55515		
8	95548	20725	22458		
9	00000	44154	10466		

DIFFERENCE OF AGE Twenty-two YEARS.
(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
37	80648	29347	13737	11·079	4·031
8	73931	27429	14887	11·006	4·083
9	67734	25684	16136	10·930	4·144
40	62017	24073	17493	10·849	4·211
1	56745	22558	18967	10·763	4·279
2	51883	21119	20569	10·672	4·344
3	47401	19752	22311	10·576	4·407
4	43270	18454	24205	10·474	4·467
5	39462	17223	26266	10·365	4·524
6	35955	16057	28510	10·251	4·578
7	32724	14955	30955	10·130	4·629
8	29749	13925	33612	9·999	4·680
9	27009	12969	36496	9·857	4·733
50	24485	12091	39620	9·701	4·790
1	22160	11289	43014	9·532	4·856
2	20019	10560	46701	9·349	4·932
3	18047	98928	50717	9·153	5·017
4	16230	92757	55025	8·931	5·104
5	14562	86983	59945	8·729	5·214
6	13029	81525	65244	8·501	5·320
7	11623	76326	71121	8·266	5·428
8	10335	71332	77631	8·023	5·538
9	91576	66500	84931	7·778	5·648
60	80836	61806	93112	7·527	5·755
1	71070	57227	10239	7·277	5·859
2	62215	52761	11292	7·025	5·958
3	54215	48428	12500	6·777	6·054
4	47016	44250	13892	6·531	6·147
5	40562	40244	15494	6·285	6·235
6	34802	36427	17360	6·042	6·324
7	29682	32810	19531	5·797	6·408
8	25155	29394	22091	5·557	6·493
9	21173	26179	25113	5·317	6·574
70	17690	23168	28710	5·079	6·652
1	14662	20361	33024	4·842	6·724
2	12049	17760	38266	4·611	6·796
3	98104	15354	44671	4·382	6·859
4	79099	13145	52619	4·162	6·917
5	63112	11132	62548	3·948	6·963
6	49794	93156	75090	3·739	6·995
7	38821	76946	91128	3·538	7·012
8	29832	62667	11188	3·343	7·011
9	22692	50264	13907	3·156	6·990
80	16983	39670	17518	2·975	6·949
1	12516	30780	22383		
2	90723	23459	29040		
3	64612	17548	38298		
4	45156	12870	51398		
5	30928	92463	70280		
6	20730	64969	98062		
7	13579	44576	13983		
8	86712	29884	20378		
9	53811	19551	30393		
90	32271	12487	46427		
1	18546	77653	72858		
2	10033	47308	11747		
3	50020	27495	19676		
4	22310	14921	36088		
5	85816	72641	72841		
6	26940	30618	16985		
7	62597	10524	48356		
8	11132	25319	19431		
9	00000	54366	89834		

DIFFERENCE OF AGE Twenty-three YEARS.
(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^{-2}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{-2}$
38	78235	28870	14106	11·036	4·072
9	71694	26995	15288	10·961	4·127
40	65660	25291	16572	10·881	4·191
1	60094	23718	17967	10·797	4·261
2	54961	22239	19483	10·708	4·333
3	50229	20834	21130	10·613	4·402
4	45866	19498	22922	10·513	4·469
5	41845	18229	24871	10·407	4·554
6	38141	17025	26993	10·295	4·596
7	34728	15883	29304	10·177	4·654
8	31585	14812	31817	10·049	4·713
9	28690	13815	34542	9·910	4·771
50	26023	12898	37493	9·757	4·836
1	23565	12058	40680	9·586	4·905
2	21299	11297	44136	9·401	4·986
3	19211	10598	47900	9·202	5·076
4	17289	99493	52016	8·993	5·175
5	15517	93438	56762	8·808	5·304
6	13892	87703	61518	8·546	5·395
7	12399	82235	67006	8·308	5·510
8	11032	76968	72591	8·008	5·587
9	97806	71860	79932	7·818	5·744
60	86391	66882	87605	7·568	5·849
1	76001	62016	96253	7·315	5·969
2	66578	57254	10612	7·065	6·076
3	58056	52620	11755	6·813	6·175
4	50381	48134	13029	6·564	6·271
5	43497	43823	14526	6·318	6·366
6	37346	39706	16257	6·071	6·455
7	31876	35799	18281	5·827	6·544
8	27034	32097	20652	5·583	6·629
9	22772	28611	23465	5·343	6·714
70	19042	25341	26810	5·105	6·794
1	15798	22291	30819	4·869	6·870
2	12994	19465	35662	4·634	6·942
3	10590	16855	41601	4·406	7·012
4	85458	14454	48926	4·181	7·072
5	68249	12263	58108	3·966	7·126
6	53901	10284	69697	3·757	7·168
7	42067	85140	84502	3·555	7·195
8	32418	69531	10364	3·360	7·206
9	24647	55942	12869	3·172	7·199
80	18471	44297	16191	2·991	7·172
1	13631	34482	20662		
2	98960	26362	26771		
3	70595	19780	35255		
4	49426	14552	47239		
5	33918	10485	64484		
6	22783	73905	89809		
7	14959	50877	12781		
8	95777	34233	18584		
9	59611	22487	27650		
90	35871	14426	42123		
1	20698	90155	65906		
2	11239	55171	10572		
3	56268	32253	17817		
4	25214	17577	32202		
5	97482	86184	64657		
6	30746	36480	14984		
7	71952	12629	42461		
8	12866	30602	16924		
9	00000	66272	77722		

DIFFERENCE OF AGE Twenty-four YEARS.

(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives.	Rever-sionary.
				$a_{x:y}$	$a_{x:y}^2$
39	75863	28425	14487	10·990	4·118
40	69494	26595	15702	10·911	4·176
1	63619	24930	17022	10·829	4·244
2	58201	23395	18456	10·742	4·318
3	53205	21952	20015	10·649	4·394
4	48599	20579	21709	10·550	4·467
5	44353	19273	23553	10·446	4·539
6	40440	18031	25559	10·336	4·609
7	36836	16842	27744	10·220	4·673
8	33516	15732	30120	10·095	4·738
9	30457	14695	32696	9·958	4·805
50	27639	13738	35485	9·808	4·875
1	25042	12861	38497	9·640	4·951
2	22646	12065	41741	9·453	5·036
3	20437	11334	45270	9·252	5·131
4	18401	10655	49126	9·040	5·234
5	16527	10018	53354	8·818	5·345
6	14801	94170	57923	8·573	5·454
7	13218	88425	63179	8·351	5·567
8	11766	82885	68891	8·106	5·710
9	10438	77498	75288	7·859	5·835
60	92253	72236	82447	7·606	5·956
1	81211	67075	90560	7·354	6·074
2	71186	62014	99753	7·101	6·186
3	62118	57073	11028	6·850	6·294
4	53942	52275	12232	6·598	6·394
5	46602	47646	13624	6·349	6·491
6	40041	43216	15241	6·103	6·587
7	34200	39001	17120	5·855	6·677
8	29027	35004	19331	5·611	6·767
9	24468	31226	21938	5·368	6·850
70	20476	27680	25051	5·129	6·934
1	17002	24368	28780	4·893	7·013
2	13997	21297	33281	4·658	7·081
3	11418	18461	38770	4·427	7·157
4	92229	15856	45563	4·202	7·224
5	73721	13475	54030	3·983	7·281
6	58277	11321	64750	3·773	7·330
7	45528	93922	78433	3·571	7·367
8	35122	76881	96100	3·375	7·388
9	26733	62027	11921	3·187	7·394
80	20058	49269	14982	3·005	7·381
1	14822	38481	19097		
2	10775	29517	24713		
3	76983	22217	32500		
4	53987	16395	43484		
5	37118	11850	59266		
6	24978	83772	82401		
7	16434	57850	11705		
8	10547	39055	16985		
9	65809	25748	25216		
90	39714	16583	38321		
1	22991	10408	59796		
2	12534	63993	95636		
3	62983	37571	16036		
4	28341	20595	28867		
5	11008	10139	57696		
6	34900	43239	13301		
7	82059	15028	37461		
8	14771	36698	14861		
9	00000	79918	67698		

DIFFERENCE OF AGE Twenty-five YEARS.

(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives.	Rever-sionary.
				$a_{x:y}$	$a_{x:y}^2$
40	73531	27985	14879	10·941	4·164
1	67331	26198	16128	10·859	4·225
2	61612	24574	17485	10·773	4·297
3	56337	23075	18960	10·681	4·375
4	51474	21664	20563	10·585	4·455
5	46991	20321	22307	10·482	4·533
6	42860	19044	24204	10·374	4·609
7	39053	17829	26271	10·260	4·684
8	35547	16681	28517	10·137	4·757
9	32316	15608	30953	10·003	4·831
50	29339	14612	33589	9·855	4·908
1	26594	13698	36435	9·690	4·991
2	24063	12865	39501	9·505	5·082
3	21727	12101	42813	9·302	5·181
4	19573	11391	46429	9·088	5·289
5	17588	10724	50391	8·863	5·404
6	15762	10092	54756	8·631	5·526
7	14081	94898	59488	8·377	5·645
8	12542	89077	64956	8·147	5·766
9	11132	83410	70932	7·896	5·916
60	98441	77861	77658	7·645	6·047
1	86708	72406	85228	7·390	6·171
2	76053	67038	93853	7·138	6·292
3	66406	61787	10366	6·884	6·405
4	57706	56672	11494	6·633	6·514
5	49888	51721	12790	6·381	6·615
6	42892	46965	14294	6·131	6·713
7	36661	42430	16050	5·884	6·810
8	31137	38117	18103	5·637	6·900
9	26267	34037	20534	5·394	6·989
70	21997	30195	23420	5·152	7·072
1	18279	26603	26892	4·916	7·154
2	15061	23268	31079	4·681	7·231
3	12297	20187	36182	4·449	7·304
4	99421	17356	42463	4·222	7·370
5	79547	14773	50317	4·003	7·433
6	62937	12432	60205	3·789	7·485
7	49214	10333	72866	3·586	7·529
8	38003	84758	89199	3·390	7·560
9	28956	68541	11055	3·201	7·577
80	21751	54595	13878	3·019	7·577
1	16092	42775	17956		
2	11714	32922	22840		
3	83803	24862	30000		
4	58857	18405	40087		
5	40527	13344	54555		
6	27322	94625	75733		
7	18011	65538	10739		
8	11582	44382	15555		
9	72434	29356	23047		
90	43820	18974	34948		
1	25437	11956	54400		
2	13913	73811	86771		
3	70190	43536	14506		
4	31699	23964	25980		
5	12364	11868	51719		
6	39382	50805	11869		
7	93091	17798	33252		
8	16822	43642	13111		
9	00000	95688	59446		

DIFFERENCE OF AGE Twenty-six YEARS.

(Male the elder.)

x	N _{x:y}	N _{x-2:y}	D _{x:y} ⁻¹	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
41	71238	27579	15283	10.887	4.215
2	65202	25835	16567	10.802	4.280
3	59634	24249	17962	10.711	4.356
4	54501	22784	19479	10.616	4.438
5	49768	21405	21129	10.515	4.523
6	45406	20091	22924	10.409	4.606
7	41386	18841	24878	10.296	4.687
8	37683	17659	27002	10.175	4.768
9	34270	16550	29306	10.043	4.850
50	31125	15518	31798	9.897	4.934
1	28226	14567	34489	9.735	5.024
2	25551	13699	37386	9.553	5.122
3	23083	12900	40515	9.352	5.226
4	20805	12157	43909	9.135	5.338
5	18706	11460	47624	8.909	5.458
6	16772	10798	51713	8.673	5.584
7	14994	10165	56233	8.432	5.716
8	13359	95548	61161	8.170	5.844
9	11863	89594	66881	7.934	5.992
60	10497	83757	73164	7.680	6.028
1	92510	78004	80277	7.426	6.262
2	81188	72331	88328	7.171	6.389
3	70935	66761	97532	6.918	6.511
4	61680	61325	10805	6.665	6.626
5	53360	56046	12019	6.413	6.736
6	45908	50960	13419	6.160	6.838
7	39265	46090	15052	5.910	6.937
8	33372	41449	16971	5.664	7.034
9	28172	37048	19229	5.417	7.124
70	23610	32898	21922	5.176	7.212
1	19633	29007	25141	4.936	7.293
2	16189	25390	29039	4.701	7.373
3	13229	22044	33788	4.470	7.448
4	10706	18969	39629	4.243	7.517
5	85735	16162	46892	4.020	7.579
6	67899	13622	56068	3.807	7.638
7	53139	11341	67752	3.600	7.684
8	41072	93195	82868	3.404	7.723
9	31325	75517	10260	3.214	7.748
80	23555	60291	12869	3.031	7.759
1	17446	47370	16369		
2	12714	36574	21133		
3	91080	27715	27728		
4	64055	20587	37003		
5	44171	14974	50292		
6	29827	10651	69713		
7	19696	74000	98703		
8	12689	50260	14273		
9	79516	33346	21107		
90	48209	21623	31941		
1	28052	13672	49610		
2	15384	84712	78939		
3	77853	50163	13161		
4	35302	27737	23501		
5	13819	13792	46548		
6	44201	59410	10639		
7	10499	20884	29672		
8	19067	51659	11638		
9	00000	11358	52446		

DIFFERENCE OF AGE Twenty-seven YEARS.

(Male the elder.)

x	N _{x:y}	N _{x-2:y}	D _{x:y} ⁻¹	Annuities.	
				Joint Lives. a _{x:y}	Rever- sionary. a _{x:y} ²
42	68981	27198	15698	10.823	4.270
3	63105	25495	17019	10.740	4.339
4	57686	23945	18454	10.645	4.419
5	52690	22513	20015	10.546	4.506
6	48085	21163	21714	10.441	4.595
7	43841	19878	23562	10.330	4.684
8	39930	18661	25571	10.211	4.772
9	36326	17518	27749	10.080	4.861
50	33005	16453	30105	9.936	4.953
1	29942	15467	32649	9.776	5.050
2	27116	14564	35488	9.623	5.168
3	24508	13731	38346	9.398	5.265
4	22101	12955	41552	9.183	5.383
5	19881	12226	45039	8.954	5.506
6	17835	11534	48874	8.717	5.637
7	15952	10871	53110	8.462	5.774
8	14223	10229	57815	8.193	5.914
9	12635	96051	62973	7.957	6.049
60	11185	89917	68985	7.716	6.203
1	98628	83866	75633	7.460	6.343
2	86608	77883	83197	7.206	6.480
3	75714	71996	91790	6.950	6.609
4	65877	66230	10166	6.697	6.733
5	57026	60620	11298	6.443	6.849
6	49096	55196	12610	6.191	6.960
7	42020	49989	14131	5.938	7.064
8	35737	45006	15916	5.688	7.163
9	30189	40270	18027	5.442	7.259
70	25318	35793	20528	5.197	7.348
1	21069	31590	23532	4.958	7.434
2	17385	27672	27149	4.720	7.513
3	14218	24043	31571	4.489	7.591
4	11516	20703	37006	4.262	7.661
5	92305	17654	43762	4.039	7.726
6	73167	14894	52252	3.823	7.782
7	57318	12419	63095	3.616	7.836
8	44340	10222	77051	3.416	7.876
9	33849	82984	95246	3.224	7.904
80	25477	66386	11945	3.043	7.930
1	18889	52280	15179		
2	13782	40479	19578		
3	98841	30772	25657		
4	69602	22937	34201		
5	48062	16740	46425		
6	32501	11946	64266		
7	21495	83261	90859		
8	13872	56725	13118		
9	87084	37745	19366		
90	52900	24549	29253		
1	30846	15571	45343		
2	16955	96795	71990		
3	86028	57519	11973		
4	39130	31927	21323		
5	15381	15949	42107		
6	49373	68967	95756		
7	11777	24405	26598		
8	21481	60587	10385		
9	00000	13434	46553		

DIFFERENCE OF AGE Twenty-eight YEARS.

(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^2$
43	66759	26841	16127	10.766	4.329
4	61039	25176	17485	10.673	4.402
5	55766	23661	18962	10.574	4.487
6	50904	22260	20569	10.470	4.579
7	46423	20939	22318	10.361	4.673
8	42294	19688	24218	10.243	4.768
9	38489	18512	26278	10.115	4.865
50	34981	17414	28506	9.972	4.964
1	31746	16396	30912	9.813	5.068
2	28761	15460	33501	9.635	5.179
3	26006	14593	36296	9.439	5.297
4	23463	13784	39327	9.227	5.421
5	21117	13022	42623	9.000	5.550
6	18953	12299	46221	8.760	5.685
7	16961	11606	50193	8.513	5.825
8	15130	10934	54607	8.262	5.971
9	13450	10277	59528	8.007	6.118
60	11910	96343	64955	7.736	6.258
1	10508	89985	71313	7.494	6.417
2	92322	83691	78383	7.236	6.560
3	80756	77483	86453	6.982	6.699
4	70304	71388	95674	6.726	6.830
5	60896	65439	10630	6.473	6.956
6	52460	59675	11854	6.217	7.074
7	44930	54122	13280	5.967	7.187
8	38238	48793	14943	5.714	7.291
9	32323	43708	16907	5.465	7.390
70	27127	38890	19245	5.221	7.484
1	22589	34356	22037	4.978	7.571
2	18654	30124	25412	4.740	7.655
3	15266	26192	29515	4.506	7.731
4	12374	22570	34578	4.279	7.804
5	99269	19259	40866	4.057	7.870
6	78762	16260	48764	3.841	7.929
7	61755	13571	58801	3.631	7.980
8	47819	11187	71756	3.431	8.027
9	36536	90968	88628	3.238	8.062
80	27525	72909	11097	3.054	8.091
1	20427	57532	14089		
2	14919	44648	18155		
3	10712	34038	23768		
4	75518	25454	31647		
5	52213	18642	42907		
6	35356	13350	59324		
7	23417	93347	83758		
8	15135	63800	12075		
9	95172	42584	17799		
90	57914	27776	26840		
1	33833	17669	41527		
2	18635	11016	65797		
3	94764	65666	10919		
4	43213	36573	19398		
5	17037	18339	38203		
6	54922	79670	86619		
7	13149	28295	23939		
8	24073	70754	93094		
9	00000	15718	41540		

DIFFERENCE OF AGE Twenty-nine YEARS.

(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^2$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^2$
44	64568	26504	16569	10.698	4.391
5	59002	24877	17966	10.600	4.469
6	53870	23395	19470	10.488	4.553
7	49140	22024	21142	10.389	4.636
8	44781	20739	22939	10.272	4.757
9	40763	19530	24888	10.145	4.861
50	37059	18399	26996	9.904	4.967
1	33642	17350	29270	9.847	5.078
2	30490	16384	31718	9.671	5.197
3	27579	15486	34361	9.476	5.321
4	24893	14644	37226	9.267	5.451
5	22414	13849	40340	9.042	5.587
6	20128	13093	43741	8.804	5.727
7	18021	12368	47470	8.555	5.871
8	16083	11666	51606	8.300	6.020
9	14305	10979	56221	8.042	6.173
60	12676	10303	61402	7.783	6.326
1	11187	96359	67146	7.512	6.470
2	98333	89747	73905	7.268	6.633
3	86071	83216	81456	7.011	6.778
4	74975	76788	90116	6.756	6.920
5	64979	70500	10004	6.500	7.053
6	56013	64386	11153	6.247	7.181
7	48002	58486	12483	5.992	7.301
8	40880	52804	14042	5.740	7.415
9	34580	47366	15873	5.489	7.518
70	29040	42194	18050	5.242	7.616
1	24199	37315	20659	4.999	7.709
2	19997	32749	23797	4.759	7.793
3	16377	28503	27627	4.524	7.875
4	13284	24579	32327	4.294	7.946
5	10665	20987	38185	4.072	8.014
6	84689	17731	45337	3.856	8.074
7	66467	14809	54877	3.648	8.127
8	51513	12219	66872	3.445	8.171
9	39397	99510	82537	3.252	8.213
80	29705	79883	10318	3.065	8.242
1	22065	63152	13089		
2	16131	49108	16851		
3	11594	37524	22040		
4	81826	28140	29316		
5	56640	20677	39704		
6	38401	14859	54830		
7	25468	10427	77317		
8	16484	71496	11131		
9	10381	47873	16385		
90	63271	31321	24668		
1	37026	19980	38101		
2	20431	12492	60259		
3	10410	74676	99798		
4	47577	41718	17690		
5	18804	20989	34755		
6	60800	91533	78589		
7	14621	32666	21655		
8	26854	82007	83786		
9	00000	18346	37238		

DIFFERENCE OF AGE Thirty YEARS.

(Male the elder.)

x	$N_{x:y}$	$N_{x:y}^{\frac{2}{3}}$	$D_{x:y}^{-1}$	Annuities.	
				Joint Lives. $a_{x:y}$	Rever- sionary. $a_{x:y}^{\frac{2}{3}}$
45	62411	26190	17025	10.625	4.459
6	56995	24598	18464	10.524	4.542
7	52002	23147	20029	10.415	4.636
8	47400	21813	21730	10.300	4.740
9	43158	20571	23574	10.174	4.849
50	39247	19409	25567	10.034	4.962
1	35639	18329	27718	9.878	5.080
2	32310	17333	30034	9.704	5.206
3	29236	16405	32533	9.511	5.337
4	26398	15533	35240	9.303	5.474
5	23779	14707	38184	9.080	5.616
6	21364	13918	41398	8.844	5.762
7	19138	13160	44922	8.597	5.912
8	17089	12426	48805	8.340	6.065
9	15207	11707	53135	8.080	6.221
60	13482	10999	57991	7.818	6.378
1	11907	10299	63473	7.558	6.537
2	10470	96053	69587	7.286	6.684
3	91676	89191	76803	7.041	6.850
4	79898	82430	84903	6.784	6.999
5	69285	75798	94229	6.529	7.142
6	59758	69336	10496	6.272	7.278
7	51244	63077	11745	6.019	7.408
8	43668	57039	13200	5.764	7.529
9	36964	51240	14916	5.514	7.643
70	31062	45708	16945	5.263	7.745
1	25901	40470	19376	5.019	7.841
2	21419	35557	22309	4.778	7.932
3	17553	30976	25871	4.541	8.014
4	14248	26738	30258	4.311	8.090
5	11447	22847	35699	4.086	8.156
6	90971	19315	42549	3.871	8.218
7	71457	16142	51245	3.662	8.272
8	55433	13328	62409	3.460	8.318
9	42433	10864	76920	3.264	8.357
80	82026	87342	96093	3.077	8.393
1	23810	69158	12170		
2	17422	53877	15655		
3	12533	41250	20457		
4	88548	31005	27184		
5	61359	22847	36779		
6	41649	16473	50736		
7	27656	11601	71461		
8	17924	79828	10275		
9	11303	53628	15104		
90	68994	35198	22708		
1	40437	22521	35018		
2	22350	14118	55289		
3	11409	84623	91398		
4	52244	47406	16169		
5	20694	23923	31696		
6	67075	10467	71496		
7	16178	37493	19647		
8	29838	94614	75792		
9	00000	21220	33515		

ANNUITIES. DAUGHTERS, UNMARRIED. 4½ PER CENT.

	D_u	N_u	D_u^{-1}	a_u		D_u	N_u	D_u^{-1}	a_u
0	1.000000	10924892	1.000000	10.925	60	53103	495549	18831	9.332
1	828029	10098863	12077	12.194	1	49350	446199	20263	9.041
2	743307	9353556	13453	12.583	2	45762	400437	21852	8.750
3	686131	8667425	14574	12.632	3	42349	358088	23613	8.456
4	640711	8026714	15608	12.528	4	39084	319004	25586	8.162
5	602280	7424434	16604	12.328	5	35971	283033	27800	7.868
6	568696	6855738	17584	12.055	6	33010	250023	30294	7.574
7	538460	6317278	18571	11.732	7	30184	219839	33130	7.283
8	510597	5806681	19585	11.372	8	27501	192338	36362	6.994
9	484855	5321826	20625	10.976	9	24954	167384	40074	6.708
10	460904	4860922	21696	10.546	70	22544	144840	44358	6.425
1	438475	4422447	22806	10.086	1	20264	124576	49349	6.148
2	417346	4005101	23961	9.597	2	18122	106454	55182	5.874
3	397332	3607769	25168	9.080	3	16111	90343	62069	5.607
4	378294	3229475	26434	8.537	4	14235	76108	70249	5.347
5	360113	2869362	27769	7.968	5	12491	63617	80058	5.098
6	343674	2532688	29202	7.523	6	10882	52735	91895	4.846
7	308718	2228970	32925	7.339	7	9405	43330	10638	4.607
8	266967	1962003	37458	7.849	8	8060	35270	12407	4.376
9	230625	1731378	43360	7.507	9	6845	28425	14609	4.153
20	197241	1534137	50699	7.778	80	5758	22667	17367	3.938
1	167996	1366141	59527	8.132	1	4792	17875	20868	3.730
2	143664	1222477	69607	8.509	2	3944	13931	25355	3.532
3	123466	1099011	80994	8.901	3	3209	10722	31162	3.341
4	106707	992304	93715	9.299	4	2578	8144	38790	3.159
5	92782	899522	10778	9.695	5	2045	6099	48900	2.982
6	81183	818339	12318	10.080	6	1598	4501	62578	2.817
7	71511	746828	13984	10.444	7	1229	32721	81867	2.662
8	63387	683441	15776	10.771	8	9333	23389	10715	2.506
9	56512	626929	17696	11.094	9	6962	16426	14364	2.359
30	50653	576276	19742	11.377	90	5101	11325	19604	2.220
1	45623	530653	21919	11.631	1	8661	7664	27815	2.093
2	41289	489364	24220	11.852	2	2580	5084	38760	1.971
3	37522	451842	26651	12.042	3	1785	3299	56022	1.848
4	34214	417628	29228	12.206	4	1213	2086	82440	1.720
5	31292	386336	31957	12.346	5	794	1292	12594	1.627
6	28692	357644	34853	12.465	6	512	780	19581	1.523
7	26363	331281	37932	12.566	7	322	458	31056	1.422
8	24270	307011	41203	12.650	8	201	257	49751	1.279
9	22385	284626	44673	12.715	9	115	1418	66957	1.233
40	20683	263943	48349	12.761	100	735	683	13605	0.929
1	19144	244799	52236	12.787	1	852	331	28409	
2	17744	227055	56357	12.796	2	224	107	44643	
3	16470	210585	60716	12.786	3	107			
4	15313	195272	65304	12.752					
5	14257	181015	70141	12.697					
6	13293	167722	75228	12.617					
7	12411	155311	80574	12.514					
8	11600	143711	86207	12.389					
9	10854	132857	92132	12.240					
50	10163	1226937	98396	12.073					
1	95687	1131250	10451	11.823					
2	90036	1041214	11107	11.565					
3	84684	956530	11809	11.296					
4	79608	876922	12562	11.016					
5	74678	802244	13391	10.743					
6	69966	732278	14293	10.466					
7	65456	666822	15277	10.187					
8	61143	605679	16355	9.906					
9	57027	548652	17536	9.621					

ANNUITIES. FATHERS AND DAUGHTERS. DIFF. 34. 4½ PER CENT.

Ages.		$\frac{x+u}{2}$	l_x	l_{x+u}	D_{x+u}	N_{x+u}	D_{x+u}^{-1}	a_{x+u}	u
x	u								
84	0	17	67780	677800	3207190	26283192	31180	8.195	0
5	1	18	66031	571360	2587120	23696072	38653	9.159	1
6	2	19	64317	522068	2262130	21433942	44206	9.475	2
7	3	20	62640	490465	2033678	19400264	49172	9.539	3
8	4	21	61001	466084	1849363	17550901	54073	9.490	4
9	5	22	59399	445819	1692779	15858122	59074	9.368	5
40	6	23	57834	428313	1556726	14301396	64237	9.187	6
1	7	24	56306	412593	1434600	12866796	69706	8.969	7
2	8	25	54815	398023	1324344	11542452	75509	8.716	8
3	9	26	53359	384473	1224172	10318280	81688	8.429	9
4	10	27	51936	371742	1132666	9185614	88287	8.110	10
5	1	28	50545	359668	1048686	8136928	95357	7.759	1
6	2	29	49184	348110	971279	7165649	10296	7.378	2
7	3	30	47852	336950	899657	6265992	11117	6.966	3
8	4	31	46556	326162	833352	5432640	12000	6.519	4
9	5	32	45303	315726	771950	4660690	12954	6.037	5
50	16	33	44099	300261	702524	3958166	14234	5.634	6
1	7	34	42949	275677	617229	3340937	16201	5.413	7
2	8	35	41857	246785	528748	2812189	18913	5.319	8
3	9	36	40809	217206	445333	2366856	22455	5.315	9
4	20	37	39791	189282	371370	1995486	26927	5.373	20
5	1	38	38792	164241	308363	1687123	32429	5.471	1
6	2	39	37800	143020	256958	1430165	38917	5.566	2
7	3	40	36806	125067	215026	1215139	46506	5.651	3
8	4	41	35799	109864	180754	1034385	55324	5.723	4
9	5	42	34769	96953	152643	881742	65512	5.776	5
60	26	43	33708	85945	129485	752257	77229	5.810	6
1	7	44	32608	76531	110337	641920	90631	5.818	7
2	8	45	31464	68403	94372	547548	10696	5.857	8
3	9	46	30277	61323	80961	466587	12352	5.763	9
4	30	47	29048	55107	69621	396966	14363	5.702	30
5	1	48	27780	49604	59970	336996	16675	5.619	1
6	2	49	26477	44712	51728	285268	19332	5.515	2
7	3	50	25143	40322	44640	240628	22401	5.390	3
8	4	51	23778	36335	38494	202134	26039	5.263	4
9	5	52	22385	32693	33144	168990	30171	5.099	5
70	36	53	20968	29843	28467	140523	35128	4.936	6
1	7	54	19533	26246	24366	116157	41041	4.767	7
2	8	55	18088	23382	20772	95385	48142	4.592	8
3	9	56	16688	20729	17622	77763	56747	4.413	9
4	40	57	15191	18275	14867	62896	67263	4.230	40
5	1	58	13756	16006	12461	50435	80250	4.047	1
6	2	59	12345	13913	10365	40070	96479	3.866	2
7	3	60	10970	11992	8549	31521	11697	3.687	3
8	4	61	9646	10245	6989	24532	14308	3.510	4
9	5	62	8386	8686	5670	18862	17637	3.327	6
80	46	63	7203	7253	4531	14331	22070	3.163	6
1	7	64	6107	6000	3587	10744	27878	2.995	7
2	8	65	5106	4899	2803	7941	35676	2.833	8
3	9	66	4206	3946	2160	5781	46296	2.676	9
4	50	67	3410	3130	1640	4141	60976	2.525	50
5	1	68	2718	2455	1231	2910	81235	2.364	1
6	2	69	2127	1889	906.2	2003.8	11035	2.211	2
7	3	70	1632	1425	654.1	1349.7	15288	2.063	3
8	4	71	1228	1053	462.6	887.1	21617	1.918	4
9	5	72	905	761	319.9	567.2	31260	1.773	5
90	56	73	653	537	216.0	351.2	46296	1.626	6
1	7	74	460	370	142.4	208.79	70225	1.466	7
2	8	75	317	249	91.73	117.07	10903	1.276	8
3	9	76	209	160	56.40	60.67	17730	1.076	9
4	60	77	129	96	32.38	28.29	30883	.874	60
5	1	78	72	52	16.79	11.50	59559	.685	1
6	2	79	35	25	7.72	3.78	12953	.490	2
7	3	80	14	9	2.66	1.12	37594	.421	3
8	4	81	4	3	.85	.27	11765	.318	4
9	5	82	1	1	.27	.00	.000	.000	5

ANNUITIES. DAUGHTERS WITH FATHERS LIVING. 4½ PER CENT.

Ages.		Life Reversionary $a_u - a_{x+u}$	Ages.		Life Reversionary $a_u - a_{x+u}$
x	u		x	u	
34	0	2.730	70	36	7.529
5	1	3.035	1	7	7.799
6	2	3.108	2	8	8.058
7	3	3.093	3	9	8.302
8	4	3.038	4	40	8.531
9	5	2.960	5	1	8.740
			6	2	8.930
40	6	2.868	7	3	9.099
1	7	2.763	8	4	9.242
2	8	2.656	9	5	9.370
3	9	2.547			
4	10	2.436	80	46	9.454
5	1	2.327	1	7	9.519
6	2	2.219	2	8	9.556
7	3	2.114	3	9	9.564
8	4	2.018	4	50	9.548
9	5	1.931	5	1	9.459
			6	2	9.354
50	16	1.889	7	3	9.233
1	7	1.926	8	4	9.098
2	8	2.030	9	5	8.970
3	9	2.192			
4	20	2.405	90	56	8.840
5	1	2.661	1	7	8.721
6	2	2.943	2	8	8.630
7	3	3.250	3	9	8.545
8	4	3.576	4	60	8.458
9	5	3.919	5	1	8.366
			6	2	8.260
60	26	4.270	7	3	8.035
1	7	4.626	8	4	7.844
2	8	4.914	9	5	7.868
3	9	5.331			
4	30	5.675			
5	1	6.012			
6	2	6.337			
7	3	6.652			
8	4	6.943			
9	5	7.247			

THE FOREGOING ANNUITIES DEFERRED.

Age. u	Single Life.			Joint Lives.			Reversionary.			Age. u
	Deferred till 6.	Deferred till 12.	Deferred till 21.	Deferred till 6.	Deferred till 12.	Deferred till 21.	Deferred till 6.	Deferred till 12.	Deferred till 21.	
0	6.856	4.005	1.366	4.459	2.234	0.526	2.397	1.771	0.840	0
1	8.280	4.827	1.650	5.528	2.770	0.652	2.752	2.067	0.998	1
2	9.223	5.388	1.838	6.322	3.168	0.746	2.901	2.220	1.092	2
3	9.992	5.837	1.991	7.032	3.523	0.830	2.960	2.314	1.161	3
4	10.700	6.251	2.132	7.733	3.875	0.912	2.967	2.376	1.220	4
5	11.383	6.650	2.268	8.448	4.233	0.997	2.935	2.417	1.271	5
6	12.055	7.043	2.402	9.187	4.603	1.084	2.868	2.440	1.318	6
7		7.438	2.537		4.995	1.176		2.443	1.361	7
8		7.844	2.676		5.411	1.274		2.453	1.402	8
9		8.261	2.818		5.853	1.378		2.408	1.440	9
10		8.689	2.964		6.326	1.490		2.366	1.474	10
11		9.134	3.116		6.833	1.609		2.301	1.507	11
12		9.597	3.273		7.378	1.737		2.218	1.536	12
13			3.438			1.876			1.562	13
14			3.611			2.025			1.586	14
15			3.794			2.185			1.609	15
16			4.058			2.401			1.657	16
17			4.498			2.733			1.765	17
18			5.117			3.191			1.926	18
19			5.924			3.788			2.136	19
20			6.946			4.543			2.383	20
21			8.132			5.471			2.661	21

SONS.
ENGLISH LIFE TABLE No. 3. 4½ PER CENT. TEMPORARY ANNUITIES.

s	l _s	D _s	N _s	D _s ⁻¹	a _s	Deferred	
						till 6.	till 12.
0	511745	511745	4874695	19541	9.526		
1	428026	409594	4465101	24414	10.901	5.600	2.853
2	400505	366754	4098347	27266	11.175	6.997	3.564
3	386290	338505	3759842	29543	11.107	7.814	3.981
4	377077	316202	3443640	31626	10.891	8.467	4.313
5	370358	297194	3146446	33648	10.587	9.064	4.617
6	365325	280531	2865915	35647	10.216	9.643	4.912
7	361372	265546	2600369	37658	9.792	-	5.204
8	358062	251784	2348585	39717	9.328	-	5.498
9	355328	239102	2109483	41948	8.849	-	5.798
0	353031	227326	1882157	43990	8.280	-	6.124
1	351048	216315	1665842	46229	7.701	-	6.422
2	349272	205952	1459890	48555	7.088	-	6.749
3	347606	196143	1263747	50983	6.443		
4	345969	186814	1076933	53529	5.765		
5	344290	177902	899031	56211	5.054		
6	342509	169360	729671	59046	4.308		
7	340581	161155	568516	62052	3.528		
8	338469	153259	415257	65249	2.710		
9	336149	145654	269603	68656	1.851		
20	333608	138328	131275	72292	0.949		
1	330844	131275	000000				

FATHERS AND SONS.

s	α	l _s	D _{s'}	N _{s'}	D _{s'} ⁻¹	a _{s'}	Deferred	
							till 6.	till 12.
0	4	67780	346861	2628740	28830	7.579	3.975	1.830
1	5	66081	270459	2358281	36974	8.720	5.097	2.347
2	6	64317	235885	2122396	42393	8.997	5.844	2.691
3	7	62640	212039	1910357	47163	9.010	6.502	2.994
4	8	61001	192887	1717470	51846	8.904	7.148	3.292
5	9	59399	176590	1540940	56648	8.728	7.810	3.596
6	40	57894	162243	1378697	61637	8.498	-	3.913
7	1	56306	149519	1229178	66881	8.221	-	4.246
8	2	54815	138015	1091163	72453	7.906	-	4.600
9	3	53359	127582	963581	78616	7.575	-	4.991
10	4	51936	118064	845514	84703	7.162	-	5.378
1	5	50545	109337	736177	91458	6.733	-	5.806
2	6	49184	101295	634882	98717	6.267		
3	7	47852	93858	541024	10654	5.764		
4	8	46556	86973	454051	11498	5.221		
5	9	45303	80595	373456	12408	4.634		
6	50	44099	74686	298770	13389	4.000		
7	1	42949	69214	229556	14448	3.317		
8	2	41857	64150	165406	15588	2.578		
9	3	40809	59440	105966	16824	1.783		
20	4	39791	55042	50924	18168	.925		
1	5	38792	50924	00000				

SONS. REVERSIONARY ANNUITIES.

Commencing on Decease of the Father, and continuing till the Age of 21.

s	till 21.	Deferred till 6.	Deferred till 12.
0	1.947	1.625	1.023
1	2.181	1.900	1.217
2	2.178	1.970	1.290
3	2.097	1.965	1.319
4	1.987	1.916	1.325
5	1.859	1.833	1.316
6	1.718	-	1.291
7	1.571	-	1.252
8	1.422	-	1.198
9	1.274	-	1.133
10	1.118	-	1.044
1	0.968	-	0.943
2	0.821		
3	0.679		
4	0.544		
5	0.420		
6	0.308		
7	0.211		
8	0.132		
9	0.068		
20	0.024		

COMPUTATION OF THE PAYMENTS

TO BE REQUIRED ON

MARRIAGE AND PROMOTION, AND FOR CHILDREN.

COMPUTATION of the requisite DONATIONS on MARRIAGE and on subsequent PROMOTION to each RANK.

Ranks.	Present Ages.		Advanced Ages.		Present Ages.	Advanced Ages.	Advanced Ages.	Half Product of the Three preceding Columns.	Present Ages.	Differences of the Two preceding Columns.	Present Ages.
	H.	W.	H.	W.	$D_{x'y}^{-1}$	$D_{(x'y)+n}$	$a_{(x'y)+n}$		$a_{x'y}$		$a_{x'y}^{\frac{1}{2}}$
Lieutenant - - -	25	20	49	44	13330	98560	9.233	0.606	11.767	11.161	3.752
Captain - - -	30	24	49	43	18687	105247	9.315	0.916	11.379	10.463	3.902
Major - - -	38	31	49	42	33929	112266	9.389	1.788	10.659	8.871	3.928
Lieut.-Colonel - - -	44	36	49	41	53511	119703	9.458	3.029	10.086	7.057	3.880
Colonel - - -	49	39	49	39	73701	135684	9.600	4.800	9.600	4.800	3.932

Ranks.	Yearly Subscriptions.		Pensions.			
	Of each Rank.	Increase in each Rank.	Of each Rank.	Increase in each Rank.	The same exchanged.	
	Rs.	Rs.	£	£	Rs.	Rs.
Lieutenant - - -	120	0	40		417.39	
Captain - - -	240	120	70	30	730.43	313.04
Major - - -	360	120	100	30	1043.48	313.04
Lieut.-Colonel - - -	480	120	130	30	1356.52	313.04
Colonel - - -	600	120	160	30	1669.57	313.04

Ranks.	Present Values of the				Differences, being the requisite Donations.	
	Yearly Subscriptions.	Increase in each Rank.	Pensions.	Increase.	On Marriage.	On Promotion.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Lieutenant - - -	1339.32		1566.05		236.73	
Captain - - -	2511.12	1255.56	2850.14	1221.51	339.02	
Major - - -	3193.56	1064.52	4098.79	1229.64	905.23	165.12
Lieut.-Colonel - - -	3387.36	846.84	5263.81	1214.61	1875.95	367.77
Colonel - - -	2880.00	576.00	6564.79	1231.83	3684.79	655.83

COMPUTATION of the MARRIAGE DONATIONS for DISPARITY of AGES.

Difference of Ages.	Age of Husband.	$\frac{a-x}{y}$ Half Rates after Age 49.	Rank and Rates and Values of Subscription.					$\frac{a-x}{y}$ Ex-changed into Rupees.	Rank, and Amounts and Values of Pensions.				
			Lient. Rs. 120.	Captain. Rs. 240.	Major Rs. 360.	Lt.-Col. Rs. 480.	Colonel. Rs. 600.		Lient. £40.	Captain. £70.	Major. £100.	Lt.-Col. £130.	Colonel. £160.
15	30	10.748	1290	2580	3869	5159	6449	39.663	1587	2776	3966	5156	6346
	35	9.875	1185	2370	3555	4740	5925	42.198	1688	2954	4220	5486	6752
	40	8.662	1039	2079	3118	4158	5197	43.910	1756	3074	4391	5708	7026
	45	6.848	822	1644	2465	3287	4109	44.744	1790	3132	4474	5817	7159
	50	4.885	586	1172	1759	2345	2931	46.437	1857	3251	4644	6037	7430
	55	4.415	530	1060	1589	2119	2649	47.708	1908	3340	4771	6202	7633
20	60	3.839	461	921	1382	1843	2303	51.443	2058	3601	5144	6688	8231
	85	9.985	1198	2396	3595	4793	5991	41.301	1652	2891	4130	5369	6608
	40	8.794	1055	2111	3166	4221	5276	44.243	1770	3097	4424	5752	7079
	45	7.062	847	1695	2542	3390	4237	46.779	1871	3275	4678	6081	7485
	50	5.024	603	1206	1809	2412	3014	48.918	1957	3424	4892	6359	7827
	55	4.546	546	1091	1637	2182	2728	52.769	2111	3694	5277	6860	8443
25	60	3.950	474	948	1422	1896	2370	57.725	2309	4041	5773	7504	9236
	40	8.885	1066	2132	3199	4265	5331	43.450	1738	3042	4345	5649	6952
	45	7.170	860	1721	2581	3442	4302	47.301	1892	3311	4730	6149	7568
	50	5.156	619	1237	1856	2475	3094	51.214	2049	3585	5121	6658	8194
	55	4.660	559	1118	1678	2237	2796	56.390	2256	3947	5639	7331	9022
	60	4.051	486	972	1458	1944	2431	63.099	2524	4417	6310	8203	10096
30	45	7.194	863	1727	2590	3453	4316	46.529	1861	3257	4653	6049	7445
	50	5.246	630	1259	1889	2518	3148	51.777	2071	3624	5178	6731	8284
	55	4.769	572	1145	1717	2289	2861	58.602	2344	4102	5860	7618	9376
	60	4.138	497	993	1490	1986	2483	66.553	2662	4659	6655	8652	10648

Note.—The differences of the corresponding values show the requisite marriage donations. For example, at age 50 the donation of a colonel for a disparity of 20 years is 7827 — 3014 = Rs. 4813, which amount is entered in the scale. The intermediate values have been interpolated.

SCALE of MARRIAGE DONATIONS. Increased for Disparity of Age.

Age.	Captains.		Majors.		Lient.-Colonels.			Colonels.			
	15.	20.	15.	20.	15.	20.	25.	15.	20.	25.	30.
34	533										
35	600										
36	671	543									
37	746	651									
38	825	761									
39	908	872	1143	1091							
40	995	986	1273	1258							
41	1086	1101	1409	1428							
42	1180	1218	1551	1601							
43	1279	1337	1698	1777	2110						
44	1382	1458	1850	1995	2305	2377					
45	1488	1580	2009	2136	2530	2691	2707				
46	-	-	2173	2320	2824	2984	3047				
47	-	-	2343	2507	3087	3256	3365				
48	-	-	2518	2696	3320	3508	3660				
49	-	-	-	-	3521	3737	3933				
50	-	-	-	-	3692	3947	4183	4499	4813	5100	5136
51	-	-	-	-	3832	4135	4410	4559	4973	5300	5390
52	-	-	-	-	3941	4302	4615	4638	5144	5513	5655
53	-	-	-	-	-	-	-	4735	5324	5738	5931
54	-	-	-	-	-	-	-	4850	5515	5976	6218
55	-	-	-	-	-	-	-	4984	5715	6226	6515
56	-	-	-	-	-	-	-	5136	5925	6489	6823
57	-	-	-	-	-	-	-	5307	6146	6764	7142
58	-	-	-	-	-	-	-	5495	6376	7052	7472
59	-	-	-	-	-	-	-	5702	6616	7352	7813
60	-	-	-	-	-	-	-	5928	6866	7665	8165

Example. A captain aged 37 marries a lady aged 22. The difference of age is 15. The marriage donation is Rs. 746, to be paid instead of the ordinary donation.

In like manner, a colonel aged 54 marries a lady aged 29. The difference of age is 25, and the corresponding marriage donation is Rs. 5976.

It will be observed that the amounts depend much more on the age of the husband than on that of the wife, a circumstance which, in the present case, is caused by the re-marriage of young widows being an element in the calculation. It follows that the table will serve for all cases, nearly enough.

COMPUTATION of the FAMILY CONTRIBUTION for SONS.

Son's Age.	Reversionary Pensions.		
	Immediate.	Deferred	
		till 6.	till 12.
0 to 1	2.064	1.762	1.120

Sum of the above values - 4.946.

$4.946 \times 10 = \text{£}49.46 = \text{Rs. } 516.1$

Deduct birth donation - 156.0

Balance - 360.1

The value of the joint life annuity till age 21 is - 8.608.

Hence $\frac{360.1}{8.608 \times 12} = \text{Rs. } 3.500$ monthly.

Deduct the rate in aid 2.500 „ (See Report, Art. 20.)

Balance family contribution - Rs. 1.000 „

COMPUTATION of the FAMILY CONTRIBUTION for DAUGHTERS.

Daughter's Age.	Reversionary Pensions.			
	Immediate.	Deferred.		
		till 6.	till 12.	till 21.
0 to 1	2.883	2.575	1.919	0.919
Add for £5 after the age of 21	-	-	-	0.460
				<u>1.379</u>

Sum of the values - 8.756.

$8.756 \times 10 = \text{£}87.56 = \text{Rs. } 913.67$

Deduct birth donation - 250.

663.67

The value of the joint life annuity is - 9.135.

Hence $\frac{663.67}{9.135 \times 12} = \text{Rs. } 6.054$ monthly.

Deduct the rate in aid 3.500 „ (See Report, Art. 20.)

Balance family contribution - Rs. 2.554 „

In accordance with the results herein set forth, the family contributions have been assigned as follows :—
(See Report, Art. 22.)

	Donation on Birth.		Monthly Subscription.		
	Rs.		R.	A.	P.
For Sons -	156		1	0	0
For Daughters -	250		2	8	0

F O R M S
FOR THE
REGISTRY OF MARRIAGES, BIRTHS, AND DEATHS.

DATES expressed in Decimals of the Year.

Day of the Month.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Day of the Month.
1	.000	.085	.162	.247	.329	.414	.496	.581	.666	.748	.833	.915	1
2	.003	.088	.164	.249	.332	.416	.499	.584	.668	.751	.836	.918	2
3	.005	.090	.167	.252	.334	.419	.501	.586	.671	.753	.838	.921	3
4	.008	.093	.170	.255	.337	.422	.504	.589	.674	.756	.841	.923	4
5	.011	.096	.173	.258	.340	.425	.507	.592	.677	.759	.844	.926	5
6	.014	.099	.175	.260	.342	.427	.510	.595	.679	.762	.847	.929	6
7	.016	.101	.178	.263	.345	.430	.512	.597	.682	.764	.849	.932	7
8	.019	.104	.181	.266	.348	.433	.515	.600	.685	.767	.852	.934	8
9	.022	.107	.184	.268	.351	.436	.518	.603	.688	.770	.855	.937	9
10	.025	.110	.186	.271	.353	.438	.521	.605	.690	.773	.858	.940	10
11	.027	.112	.189	.274	.356	.441	.523	.608	.693	.775	.860	.942	11
12	.030	.115	.192	.277	.359	.444	.526	.611	.696	.778	.863	.945	12
13	.033	.118	.195	.279	.362	.447	.529	.614	.699	.781	.866	.948	13
14	.036	.121	.197	.282	.364	.449	.532	.616	.701	.784	.868	.951	14
15	.038	.123	.200	.285	.367	.452	.534	.619	.704	.786	.871	.953	15
16	.041	.126	.203	.288	.370	.455	.537	.622	.707	.789	.874	.956	16
17	.044	.129	.205	.290	.373	.458	.540	.625	.710	.792	.877	.959	17
18	.047	.132	.208	.293	.375	.460	.542	.627	.712	.795	.879	.962	18
19	.049	.134	.211	.296	.378	.463	.545	.630	.715	.797	.882	.964	19
20	.052	.137	.214	.299	.381	.466	.548	.633	.718	.800	.885	.967	20
21	.055	.140	.216	.301	.384	.468	.551	.636	.721	.803	.888	.970	21
22	.058	.142	.219	.304	.386	.471	.553	.638	.723	.805	.890	.973	22
23	.060	.145	.222	.307	.389	.474	.556	.641	.726	.808	.893	.975	23
24	.063	.148	.225	.310	.392	.477	.559	.644	.729	.811	.896	.978	24
25	.066	.151	.227	.312	.395	.479	.562	.647	.732	.814	.899	.981	25
26	.068	.153	.230	.315	.397	.482	.564	.649	.734	.816	.901	.984	26
27	.071	.156	.233	.318	.400	.485	.567	.652	.737	.819	.904	.986	27
28	.074	.159	.236	.321	.403	.488	.570	.655	.740	.822	.907	.989	28
29	.077		.238	.323	.405	.490	.573	.658	.742	.825	.910	.992	29
30	.079		.241	.326	.408	.493	.575	.660	.745	.827	.912	.995	30
31	.082		.244		.411		.578	.663		.830		.997	31

Example.—The decimal part of the year corresponding to the 22d June is .471.