

## APPENDIX III

## TABLES

The following tables are used in the examples in this book and are also required for many of the exercises. While the life and sickness tables are extracts of published tables the pension fund tables are not and the rates of decrement have been arbitrarily determined so that the tables cannot be regarded as suitable for practical use in connection with the valuation of any actual fund.

1. Compound Interest Table: 4% interest.
2. Life Assurance Table: A1967-70: 4% interest.
3. Population Life Table: English Life Table No. 12—Males (based on the 1961 census) as adapted by the Industrial Life Offices Association: 4% interest.
4. Annuity Table:  $a(55)$  males and females—from age 60 only (the initial age of the published table is 20): 4% interest.
5. Pension Fund Tables: 4% interest.
6. Sickness Table: Manchester Unity Experience 1893-7; Occupation Group AHJ (and combined with English Life Table No. 12—Males): 4% interest.

TABLE 1  
COMPOUND INTEREST TABLE  
Rate of interest 4%

Constants	
Function	Value
$i$	-04
$i^{(2)}$	-039608
$i^{(4)}$	-039414
$i^{(12)}$	-039285
$\delta$	-039221
$(1+i)^{1/2}$	1.019804
$(1+i)^{1/4}$	1.009853
$(1+i)^{1/12}$	1.003274
$v$	.961538
$v^{1/2}$	.980581
$v^{1/4}$	.990243
$v^{1/12}$	.996737
$d$	.038462
$d^{(2)}$	.038839
$d^{(4)}$	.039029
$d^{(12)}$	.039157
$iji^{(2)}$	1.009902
$iji^{(4)}$	1.014877
$iji^{(12)}$	1.018204
$ij\delta$	1.019869
$i/d^{(2)}$	1.029902
$i/d^{(4)}$	1.024877
$i/d^{(12)}$	1.021537
$\log_{10}(1+i)$	-0170333

$n$	$(1+i)^n$	$v^n$	$s_{\overline{n} }$	$a_{\overline{n} }$
1	1.04000	.96154	1.0000	0.9615
2	1.08160	.92456	2.0400	1.8861
3	1.12486	.88900	3.1216	2.7751
4	1.16986	.85480	4.2465	3.6299
5	1.21665	.82193	5.4163	4.4518
6	1.26532	.79031	6.6330	5.2421
7	1.31593	.75992	7.8983	6.0021
8	1.36857	.73069	9.2142	6.7327
9	1.42331	.70259	10.5828	7.4353
10	1.48024	.67556	12.0061	8.1109
11	1.53945	.64958	13.4864	8.7605
12	1.60103	.62460	15.0258	9.3851
13	1.66507	.60057	16.6268	9.9856
14	1.73168	.57748	18.2919	10.5631
15	1.80094	.55526	20.0236	11.1184
16	1.87298	.53391	21.8245	11.6523
17	1.94790	.51337	23.6975	12.1657
18	2.02582	.49363	25.6454	12.6593
19	2.10685	.47464	27.6712	13.1339
20	2.19112	.45639	29.7781	13.5903
21	2.27877	.43883	31.9692	14.0292
22	2.36992	.42196	34.2480	14.4511
23	2.46472	.40573	36.6179	14.8568
24	2.56330	.39012	39.0826	15.2470
25	2.66584	.37512	41.6459	15.6221
26	2.77247	.36069	44.3117	15.9828
27	2.88337	.34682	47.0842	16.3296
28	2.99870	.33348	49.9676	16.6631
29	3.11865	.32065	52.9663	16.9837
30	3.24340	.30832	56.0849	17.2920
31	3.37313	.29646	59.3283	17.5885
32	3.50806	.28506	62.7015	17.8736
33	3.64838	.27409	66.2095	18.1476
34	3.79432	.26355	69.8579	18.4112
35	3.94609	.25342	73.6522	18.6646
36	4.10393	.24367	77.5983	18.9083
37	4.26809	.23430	81.7022	19.1426
38	4.43881	.22529	85.9703	19.3679
39	4.61637	.21662	90.4091	19.5845
40	4.80102	.20829	95.0255	19.7928
41	4.99306	.20028	99.8265	19.9931
42	5.19278	.19257	104.8196	20.1856
43	5.40050	.18517	110.0124	20.3708
44	5.61652	.17805	115.4129	20.5488
45	5.84118	.17120	121.0294	20.7200
46	6.07482	.16461	126.8706	20.8847
47	6.31782	.15828	132.9454	21.0429
48	6.57053	.15219	139.2632	21.1951
49	6.83335	.14634	145.8337	21.3415
50	7.10668	.14071	152.6671	21.4822
60	10.51963	.09506	237.9907	22.6235
70	15.57162	.06422	364.2905	23.3945
80	23.04980	.04338	551.2450	23.9154
90	34.11933	.02931	827.9833	24.2673
100	50.50495	.01980	1237.6237	24.5050



TABLE 2

## LIFE ASSURANCE TABLE: A1967-70

## MORTALITY FUNCTIONS

Age [x]	$l_x$	$l_{x+1}$	$l_{x+2}$	Age x+2
0	344 81-408	344 61-409	344 89-000	0
1	344 56-927	344 38-320	344 63-823	1
2	344 33-841	344 16-624	344 40-388	2
3	344 12-836	343 97-007	344 18-690	3
4	343 93-221	343 78-776	343 98-727	4
			343 80-496	5
			343 63-650	6
5	343 75-681	343 62-274	343 48-186	7
6	343 59-181	343 46-811	343 33-760	8
7	343 44-063	343 32-386	343 20-026	9
8	343 29-638	343 18-653	343 06-985	10
9	343 15-907	343 05-612	342 94-291	11
10	343 03-210	342 92-919	342 81-066	12
11	342 90-518	342 80-230	342 68-918	13
12	342 77-830	342 67-547	342 55-210	14
13	342 64-461	342 53-497	342 39-110	15
14	342 50-070	342 37-055	342 18-225	16
15	342 32-259	342 15-485	341 90-508	17
16	342 09-439	341 87-202	341 54-424	18
17	341 79-680	341 51-017	341 20-378	19
18	341 43-368	341 16-899	340 88-257	20
19	341 09-166	340 84-731	340 57-937	21
20	340 76-957	340 54-389	340 29-283	22
21	340 46-610	340 25-734	340 02-148	23
22	340 17-983	339 98-619	339 76-374	24
23	339 90-921	339 72-879	339 51-787	25
24	339 65-254	339 48-338	339 28-197	26
25	339 40-795	339 24-799	339 05-397	27
26	339 17-341	339 02-051	338 83-161	28
27	338 94-668	338 79-860	338 61-242	29
28	338 72-531	338 57-972	338 39-370	30
29	338 50-662	338 36-106	338 17-250	31
30	338 28-764	338 13-958	337 94-559	32
31	338 06-514	337 91-191	337 70-942	33
32	337 83-557	337 67-439	337 46-015	34
33	337 59-503	337 42-299	337 19-354	35
34	337 33-924	337 15-331	336 90-498	36
35	337 06-352	336 86-054	336 58-943	37
36	336 76-272	336 53-938	336 24-136	38
37	336 43-122	336 18-409	335 85-478	39
38	336 06-286	335 78-835	335 42-311	40
39	335 65-089	335 34-529	334 93-920	41
40	335 18-794	334 84-739	334 39-528	42
41	334 66-599	334 28-646	333 78-285	43
42	334 07-624	333 65-360	333 09-271	44
43	333 40-915	332 93-909	332 31-486	45
44	332 65-431	332 13-241	331 43-847	46
45	331 80-042	331 22-213	330 45-181	47
46	330 83-523	330 19-589	329 34-221	48
47	329 74-549	329 04-032	328 09-601	49
48	328 51-686	327 74-102	326 69-855	50
49	327 13-392	326 28-250	325 13-405	51
50	325 58-008	324 64-813	323 38-568	52
51	323 83-756	322 82-013	321 43-546	53
52	321 88-740	320 77-958	319 26-430	54

TABLE 2 (continued)

## MORTALITY FUNCTIONS

Age [x]	$d_x$	$d_{x+1}$	$d_{x+2}$	Age x+2
0	19-999 217	21-021 460	21-697 444	2
1	18-606 740	19-629 842	19-962 840	3
2	17-216 920	17-896 644	18-231 325	4
3	15-829 905	16-510 563	16-846 443	5
4	14-445 153	15-126 662	15-463 642	6
5	13-406 516	14-088 533	14-426 238	7
6	12-369 305	13-051 788	13-733 504	8
7	11-676 981	12-359 659	13-041 610	9
8	10-985 484	11-668 342	12-693 584	10
9	10-294 772	11-320 852	12-688 888	11
10	10-290 963	11-316 663	12-684 193	12
11	10-287 155	11-312 476	12-707 567	13
12	10-283 349	12-336 317	16-099 949	14
13	10-964 628	14-386 469	20-885 857	15
14	13-015 027	18-830 380	27-716 762	16
15	16-773 807	24-977 304	36-083 978	17
16	22-236 135	32-778 690	34-045 471	18
17	28-662 738	30-638 927	32-120 924	19
18	26-468 621	28-641 478	30-320 482	20
19	24-434 783	26-794 348	28-654 305	21
20	22-568 487	25-106 258	27-134 610	22
21	20-876 020	23-586 299	25-773 968	23
22	19-364 397	22-244 956	24-587 343	24
23	18-042 041	21-092 742	23-590 041	25
24	16-916 055	20-140 870	22-800 087	26
25	15-995 957	19-402 610	22-235 877	27
26	15-289 937	18-890 223	21-918 638	28
27	14-807 903	18-618 338	21-871 653	29
28	14-559 430	18-601 570	22-120 120	30
29	14-555 107	18-856 185	22-691 713	31
30	14-805 835	19-399 406	23-616 313	32
31	15-323 141	20-249 033	24-927 346	33
32	16-118 473	21-424 089	26-660 702	34
33	17-204 181	22-945 101	28-856 012	35
34	18-593 127	24-833 027	31-555 531	36
35	20-298 639	27-110 873	34-806 376	37
36	22-334 104	29-801 908	38-658 678	38
37	24-713 228	32-931 249	43-166 743	39
38	27-450 286	36-524 371	48-390 486	40
39	30-559 671	40-608 638	54-392 787	41
40	34-055 430	45-211 429	61-242 823	42
41	37-952 462	50-361 593	69-013 943	43
42	42-264 654	56-088 838	77-784 809	44
43	47-006 022	62-422 750	87-639 072	45
44	52-189 802	69-394 085	98-666 249	46
45	57-828 832	77-032 663	110-96 010	47
46	63-934 240	85-368 516	124-61 914	48
47	70-516 402	94-430 954	139-74 659	49
48	77-583 527	104-24 754	156-44 940	50
49	85-141 837	114-84 459	174-83 759	51
50	93-195 017	126-24 462	195-02 226	52
51	101-74 264	138-46 756	217-11 551	53
52	110-78 141	151-52 826	241-22 717	54



TABLE 2 (continued)

## MORTALITY FUNCTIONS

Age [x]	$q_{[x]}$	$q_{[x]+1}$	$q_{x+2}$	Age x+2
			-00 073 000 -00 068 000	0 1
0	-00 058 000	-00 061 000	-00 063 000	2
1	-00 054 000	-00 057 000	-00 058 000	3
2	-00 050 000	-00 052 000	-00 053 000	4
3	-00 046 000	-00 048 000	-00 049 000	5
4	-00 042 000	-00 044 000	-00 045 000	6
5	-00 039 000	-00 041 000	-00 042 000	7
6	-00 036 000	-00 038 000	-00 040 000	8
7	-00 033 000	-00 035 000	-00 036 000	9
8	-00 032 000	-00 034 000	-00 035 000	10
9	-00 030 000	-00 033 000	-00 037 000	11
10	-00 030 000	-00 033 000	-00 037 000	12
11	-00 030 000	-00 033 000	-00 040 000	13
12	-00 030 000	-00 036 000	-00 047 000	14
13	-00 032 000	-00 042 000	-00 061 000	15
14	-00 038 000	-00 055 000	-00 081 000	16
15	-00 049 000	-00 073 000	-00 105 538	17
16	-00 065 000	-00 095 880	-00 099 681	18
17	-00 083 859	-00 089 716	-00 094 140	19
18	-00 077 522	-00 083 951	-00 088 947	20
19	-00 071 637	-00 078 611	-00 084 134	21
20	-00 066 228	-00 073 724	-00 079 739	22
21	-00 061 316	-00 069 319	-00 075 801	23
22	-00 056 924	-00 065 429	-00 072 366	24
23	-00 053 079	-00 062 087	-00 069 481	25
24	-00 049 804	-00 059 328	-00 067 201	26
25	-00 047 129	-00 057 193	-00 065 582	27
26	-00 045 080	-00 055 720	-00 064 689	28
27	-00 043 688	-00 054 954	-00 064 592	29
28	-00 042 983	-00 054 940	-00 065 368	30
29	-00 042 998	-00 055 728	-00 067 101	31
30	-00 043 767	-00 057 371	-00 069 882	32
31	-00 045 326	-00 059 924	-00 073 813	33
32	-00 047 711	-00 063 446	-00 079 004	34
33	-00 050 961	-00 068 001	-00 085 577	35
34	-00 055 117	-00 073 655	-00 093 663	36
35	-00 060 222	-00 080 481	-00 103 409	37
36	-00 066 320	-00 088 554	-00 114 973	38
37	-00 073 457	-00 097 956	-00 128 528	39
38	-00 081 682	-00 108 772	-00 144 267	40
39	-00 091 046	-00 121 095	-00 162 396	41
40	-00 101 601	-00 135 021	-00 183 145	42
41	-00 113 404	-00 150 654	-00 206 673	43
42	-00 126 512	-00 168 105	-00 233 523	44
43	-00 140 986	-00 187 490	-00 263 723	45
44	-00 156 889	-00 208 935	-00 297 691	46
45	-00 174 288	-00 232 571	-00 335 783	47
46	-00 193 251	-00 258 539	-00 378 388	48
47	-00 213 851	-00 286 989	-00 425 932	49
48	-00 236 163	-00 318 079	-00 478 880	50
49	-00 260 266	-00 351 979	-00 537 740	51
50	-00 286 243	-00 388 866	-00 603 064	52
51	-00 314 178	-00 428 931	-00 675 456	53
52	-00 344 162	-00 472 375	-00 755 572	54

TABLE 2 (continued)

## MORTALITY FUNCTIONS

Age [x]	$\mu_{[x]}$	$\mu_{[x]+1}$	$\mu_{x+2}$	Age x+2
			-00 075 528 -00 070 525	0 1
0	-00 056 516	-00 059 518	-00 065 521	2
1	-00 052 514	-00 055 515	-00 060 518	3
2	-00 049 012	-00 051 013	-00 055 515	4
3	-00 045 010	-00 047 011	-00 051 013	5
4	-00 041 008	-00 043 009	-00 047 011	6
5	-00 038 007	-00 040 008	-00 043 509	7
6	-00 035 006	-00 037 007	-00 041 008	8
7	-00 033 005	-00 035 006	-00 039 008	9
8	-00 031 005	-00 033 005	-00 037 507	10
9	-00 028 504	-00 031 505	-00 037 007	11
10	-00 028 504	-00 031 505	-00 037 007	12
11	-00 028 504	-00 031 505	-00 038 507	13
12	-00 027 004	-00 033 005	-00 043 510	14
13	-00 027 003	-00 037 007	-00 054 015	15
14	-00 029 503	-00 046 511	-00 071 026	16
15	-00 037 005	-00 061 019	-00 108 623	17
16	-00 049 569	-00 080 473	-00 102 612	18
17	-00 080 963	-00 086 825	-00 096 902	19
18	-00 074 335	-00 080 769	-00 091 525	20
19	-00 068 174	-00 075 153	-00 086 512	21
20	-00 062 499	-00 070 000	-00 081 897	22
21	-00 057 330	-00 065 339	-00 077 221	23
22	-00 052 686	-00 061 195	-00 074 024	24
23	-00 048 586	-00 057 599	-00 070 853	25
24	-00 045 052	-00 054 581	-00 068 259	26
25	-00 042 105	-00 052 174	-00 066 298	27
26	-00 039 767	-00 050 413	-00 065 030	28
27	-00 038 061	-00 049 333	-00 064 523	29
28	-00 037 011	-00 048 974	-00 064 849	30
29	-00 036 639	-00 049 376	-00 066 089	31
30	-00 036 971	-00 050 582	-00 068 332	32
31	-00 038 033	-00 052 639	-00 071 673	33
32	-00 039 850	-00 055 594	-00 076 218	34
33	-00 042 449	-00 059 499	-00 082 084	35
34	-00 045 857	-00 064 407	-00 089 397	36
35	-00 050 104	-00 070 377	-00 098 296	37
36	-00 055 216	-00 077 468	-00 107 934	38
37	-00 061 224	-00 085 744	-00 121 477	39
38	-00 068 157	-00 095 273	-00 136 110	40
39	-00 076 047	-00 106 128	-00 153 032	41
40	-00 084 923	-00 118 382	-00 172 463	42
41	-00 094 819	-00 132 118	-00 194 644	43
42	-00 105 765	-00 147 419	-00 219 837	44
43	-00 117 795	-00 164 376	-00 248 332	45
44	-00 130 942	-00 183 083	-00 280 444	46
45	-00 145 239	-00 203 641	-00 316 519	47
46	-00 160 720	-00 226 156	-00 356 935	48
47	-00 177 419	-00 250 741	-00 402 107	49
48	-00 195 371	-00 277 514	-00 452 487	50
49	-00 214 609	-00 306 603	-00 508 572	51
50	-00 235 168	-00 338 138	-00 570 903	52
51	-00 257 082	-00 372 263	-00 640 073	53
52	-00 280 386	-00 409 125	-00 716 731	54
53	-00 305 114	-00 448 882	-00 801 584	55
54	-00 331 298	-00 491 701	-00 895 406	56
55	-00 358 972	-00 537 759	-00 999 042	57
56	-00 388 168	-00 587 241	-01 113 415	58
57	-00 418 918	-00 640 345	-01 239 532	59
58	-00 451 252	-00 697 279	-01 378 490	60
59	-00 485 198	-00 758 264	-01 531 487	61
60	-00 520 785	-00 823 531	-01 699 826	62
61	-00 558 039	-00 893 329	-01 884 929	63
62	-00 596 984	-00 967 916	-02 088 340	64
63	-00 637 642	-01 047 567	-02 311 742	65
64	-00 680 033	-01 132 573	-02 556 959	66
65	-00 724 174	-01 223 241	-02 825 977	67
66	-00 770 079	-01 319 893	-03 120 944	68
67	-00 817 760	-01 422 872	-03 444 192	69
68	-00 867 223	-01 532 538	-03 798 242	70
69	-00 918 471	-01 649 272	-04 185 823	71
70	-00 971 505	-01 773 476	-04 609 876	72
71	-01 026 318	-01 905 571	-05 073 576	73
72	-01 082 900	-02 046 006	-05 580 336	74
73	-01 141 235	-02 195 249	-06 133 825	75
74	-01 201 302	-02 353 796	-06 737 977	76
75	-01 263 071	-02 522 169	-07 397 000	77
76	-01 326 508	-02 700 916	-08 115 389	78
77	-01 391 572	-02 890 614	-08 897 929	79
78	-01 458 213	-03 091 870	-09 749 701	80
79	-01 526 373	-03 305 322	-10 676 087	81
80	-01 595 988	-03 531 639	-11 682 766	82
			-12 775 710	83
			-13 961 178	84
			-15 245 697	85
			-16 636 045	86
			-18 139 225	87
			-19 762 432	88
			-21 513 014	89
			-23 398 425	90
			-25 426 170	91
			-27 603 745	92
			-29 938 569	93
			-32 437 911	94
			-35 108 808	95
			-37 957 989	96
			-40 991 786	97
			-44 216 050	98
			-47 636 075	99
			-51 256 512	100
			-55 081 304	101
			-59 113 622	102
			-63 355 815	103
			-67 809 369	104
			-72 474 882	105
			-77 352 058	106
			-82 439 707	107
			-87 735 768	108
			-93 237 342	109



TABLE 2 (continued)

4% interest

SELECT						ULTIMATE	
Age [x]	$D_{[x]}$	$N_{[x]}$	$S_{[x]}$	$D_x$	$N_x$	$S_x$	Age x
0	344 81.408	835 833.48	180 511.94	344 89.000	835 843.39	180 512.06	0
1	331 31.660	801 345.85	172 153.52	331 38.291	801 354.39	172 153.63	1
2	318 36.022	768 208.21	164 139.98	318 42.074	768 216.10	164 140.08	2
3	305 92.886	736 367.35	156 457.84	305 98.090	736 374.03	156 457.92	3
4	293 99.470	705 769.82	149 094.10	294 04.176	705 775.94	149 094.18	4
5	282 54.304	676 366.72	142 036.36	282 58.262	676 371.76	142 036.42	5
6	271 54.560	648 108.92	135 272.65	271 58.091	648 113.50	135 272.70	6
7	260 98.665	620 951.27	128 791.52	261 01.798	620 955.41	128 791.57	7
8	250 84.331	594 849.63	122 581.96	250 87.342	594 853.61	122 582.01	8
9	241 09.901	569 762.45	116 633.43	241 12.795	569 766.27	116 633.48	9
10	231 74.019	545 650.03	110 935.77	231 76.570	545 653.47	110 935.81	10
11	222 74.466	522 473.60	105 479.24	222 76.917	522 476.90	105 479.28	11
12	214 09.831	500 196.81	100 254.47	214 12.188	500 199.99	100 254.51	12
13	205 78.348	478 784.13	952 524.65	205 81.024	478 787.93	952 525.11	13
14	197 78.562	458 202.67	904 645.81	197 81.530	458 206.77	904 646.33	14
15	190 07.958	438 419.98	858 824.98	190 11.763	438 425.24	858 825.66	15
16	182 64.699	419 407.09	814 982.32	182 69.390	419 413.48	814 983.13	16
17	175 46.933	401 136.85	773 040.89	175 52.492	401 144.09	773 041.78	17
18	168 54.126	383 584.49	732 926.50	168 59.584	383 591.60	732 927.37	18
19	161 89.657	366 725.08	694 567.36	161 94.979	366 732.02	694 568.21	19
20	155 52.279	350 530.32	657 894.18	155 57.436	350 537.04	657 895.01	20
21	149 40.797	334 973.13	622 840.51	149 45.767	334 979.60	622 841.31	21
22	143 54.071	320 027.63	589 342.58	143 58.839	320 033.83	589 343.55	22
23	137 91.012	305 669.08	557 339.24	137 95.567	305 674.99	557 339.96	23
24	132 50.575	291 873.80	526 771.77	132 54.913	291 879.43	526 772.46	24
25	127 31.763	278 619.17	497 583.86	127 35.886	278 624.51	497 584.52	25
26	122 33.620	265 883.55	469 721.45	122 37.535	265 888.63	469 722.07	26
27	117 55.233	253 646.27	443 132.62	117 58.953	253 651.09	443 133.21	27
28	112 95.726	241 887.55	417 767.53	112 99.271	241 892.14	417 768.10	28
29	108 54.263	230 588.47	393 578.34	108 57.655	230 592.87	393 578.88	29
30	104 30.039	219 730.97	370 519.07	104 33.310	219 735.21	370 519.60	30
31	100 22.288	209 297.76	348 545.57	100 25.471	209 301.91	348 546.08	31
32	963 0.2713	199 272.34	327 615.38	963 3.4073	199 276.43	327 615.89	32
33	925 3.2832	189 638.91	307 687.73	925 6.4185	189 643.03	307 688.24	33
34	889 0.6463	180 382.40	288 723.42	889 3.8327	180 386.61	288 723.94	34
35	854 1.7111	171 488.40	270 684.73	854 5.0060	171 492.78	270 685.28	35
36	820 5.8542	162 943.13	253 535.42	820 9.3206	162 947.77	253 536.00	36
37	788 2.4775	154 733.45	237 240.59	788 6.1842	154 738.45	237 241.22	37
38	757 1.0665	146 846.80	221 766.69	757 5.0280	146 852.27	221 767.38	38
39	727 0.8899	139 271.20	207 081.39	727 5.3065	139 277.24	207 082.15	39
40	698 1.5977	131 995.19	193 153.57	698 6.4959	132 001.93	193 154.43	40
41	670 2.6211	125 007.87	179 953.27	670 8.0930	125 015.43	179 954.24	41
42	643 3.4709	118 298.80	167 451.60	643 9.6147	118 307.34	167 452.69	42
43	617 3.6773	111 858.07	155 620.72	617 0.5970	111 867.73	155 621.96	43
44	592 2.7885	105 676.20	144 433.78	593 0.5940	105 687.13	144 435.19	44
45	568 0.3705	997 44.168	133 864.88	568 9.1776	997 56.536	133 866.47	45
46	544 6.0064	940 53.378	123 889.02	545 5.9365	940 67.358	123 890.82	46
47	521 9.2958	885 95.648	114 482.05	523 0.4756	886 11.422	114 484.08	47
48	499 9.8546	833 63.190	105 620.65	501 2.4160	833 80.946	105 622.94	48
49	478 7.3144	783 48.597	972 822.67	480 1.3938	783 68.530	972 848.46	49
50	458 1.3224	735 44.823	894 451.04	459 7.0607	735 67.136	894 479.93	50
51	438 1.5413	689 45.176	820 880.53	439 9.0830	689 70.076	820 912.79	51
52	418 1.5496	645 43.296	751 906.81	420 7.1417	645 70.993	751 942.72	52
53	399 9.3411	603 33.143	687 331.90	402 0.9326	603 63.851	687 371.72	53
54	381 6.3261	563 08.985	626 963.84	384 0.1664	563 42.918	627 007.87	54

TABLE 2 (continued)

4% interest

SELECT						ULTIMATE	
Age [x]	$D_{[x]}$	$N_{[x]}$	$S_{[x]}$	$D_x$	$N_x$	$S_x$	Age x
55	363 8.3307	524 65.379	570 616.44	366 4.5684	525 02.752	570 664.95	55
56	346 5.0983	487 97.161	518 108.94	349 3.8796	488 38.184	518 162.20	56
57	329 6.3898	452 99.429	469 265.73	332 7.8564	453 44.304	469 324.02	57
58	313 1.9850	419 67.525	423 916.16	316 6.2716	420 16.448	423 979.71	58
59	297 1.6826	387 97.026	381 894.20	300 8.9150	388 50.176	381 963.27	59
60	281 5.3028	357 83.721	343 038.30	285 5.5942	358 41.261	343 113.09	60
61	266 2.6874	329 23.597	307 191.14	270 6.1356	329 85.667	307 271.83	61
62	251 3.7020	302 12.820	274 199.42	256 9.3853	302 79.531	274 286.16	62
63	236 8.2373	276 47.715	243 913.74	241 8.2107	277 19.146	244 006.63	63
64	222 6.2106	252 24.747	216 188.40	227 9.5016	253 00.935	216 287.48	64
65	208 7.5676	229 40.498	190 881.28	214 4.1713	230 21.434	190 986.55	65
66	195 2.2839	207 91.642	167 853.75	201 2.1584	208 75.262	167 965.12	66
67	182 0.3664	187 74.923	146 970.55	188 3.4277	188 65.104	147 087.85	67
68	169 1.8542	168 87.127	128 099.77	175 7.9716	169 81.676	128 222.75	68
69	156 6.8197	151 25.055	111 112.76	163 5.8114	152 23.705	111 241.07	69
70	144 5.3689	134 85.489	958 84.189	151 6.9972	135 87.893	960 17.369	70
71	132 7.6401	119 65.170	822 91.992	140 1.6093	120 70.896	824 29.475	71
72	121 3.8036	105 60.758	702 17.476	126 9.9567	106 69.287	703 58.579	72
73	110 4.0584	926 8.8080	595 45.368	118 1.5772	937 9.5300	596 89.293	73
74	998.62904	808 5.7327	501 63.928	107 7.2347	813 7.9528	503 09.763	74
75	897.76009	700 7.7677	419 65.084	976.91702	712 0.7181	421 11.810	75
76	801.70978	603 0.9878	348 44.587	880.83121	614 3.8011	349 91.092	76
77	710.74161	515 1.1932	287 02.194	789.19865	526 2.9698	288 47.291	77
78	625.11472	436 3.9811	234 41.874	702.24821	447 3.7712	235 84.321	78
79	545.07270	366 4.6888	189 72.017	620.20821	377 1.5230	191 10.550	79
80	470.83137	304 8.3988	152 05.661	543.29713	315 1.3148	153 39.027	80
				471.71326	260 8.0176	121 87.712	81
				405.62366	213 6.3044	957 9.6944	82
				345.15280	173 0.6807	744 3.3900	83
				290.37173	138 5.5279	571 2.7093	84
				241.28824	109 5.1562	432 7.1814	85
				197.83908	853.86794	323 2.0252	86
				159.88487	656.02886	237 8.1572	87
				127.20858	496.14399	172 2.1284	88
				99.518086	368.93541	122 5.9444	89
				76.453060	269.41733	857.04898	90
				57.596108	192.96427	587.63165	91
				42.487615	135.36816	394.66739	92
				30.643310	92.880543	259.29223	93
				21.573188	62.237233	166.41869	94
				14.800229	40.664045	104.18145	95
				9.8772987	25.863816	63.517408	96
				6.9081872	15.986518	37.653592	97
				4.0201797	9.5857004	21.667074	98
				2.4424709	5.565208	12.081374	99
				1.4326059	3.1230498	6.5158530	100
				.8095713	1.6904439	3.3928032	101
				.43987495	.8808681	1.7023592	102
				.22931531	.44099186	.82149243	103
				.11446024	.21167655	.4085057	104
				.05458515	.09721631	.16882401	105
				.02481832	.04263116	.07160770	106
				.01073573	.02181284	.02897654	107
				.00440902	.00707711	.01116370	108
				.00171555	.00266810	.00408659	109



TABLE 2 (continued)

4% interest

SELECT				ULTIMATE			
Age [x]	$C_{[x]}$	$M_{[x]}$	$R_{[x]}$	$C_x$	$M_x$	$R_x$	Age $x$
0	19· 230 016	233 3·9 667	141 556·80	24· 208 625	234 1·1 771	141 566·24	0
1	17· 202 977	210 0·6 661	139 216·93	21· 667 344	139 225·07	139 225·07	1
2	15· 305 780	228 9·5 518	136 900·58	19· 288 949	229 5·3 012	136 908·10	2
3	13· 531 469	227 1·0 650	134 606·44	17· 064 320	227 6·0 122	134 612·80	3
4	11· 872 863	225 4·4 768	132 330·95	14· 984 821	225 8·9 479	132 336·79	4
5	10· 595 364	224 0·1 995	130 073·03	13· 313 989	224 3·9 631	130 077·84	5
6	9·3 996 553	222 7·2 934	127 829·51	11· 751 097	223 0·6 491	127 833·87	6
7	8·5 322 559	221 5·9 239	125 599·29	10· 541 111	221 8·8 980	125 603·23	7
8	7·7 182 555	220 5·4 984	123 380·54	9·6 489 777	220 8·3 569	123 384·33	8
9	6·9 547 791	219 5·9 605	121 172·33	8·8 104 444	219 8·7 079	121 175·97	9
10	6·6 848 133	218 7·4 797	118 973·99	8·2 455 103	218 9·8 975	118 977·26	10
11	6·4 253 268	217 9·3 280	116 784·22	7·9 254 418	218 1·6 520	116 787·36	11
12	6·1 759 129	217 1·4 928	114 602·69	7·6 177 975	217 3·7 265	114 605·71	12
13	6·3 317 993	216 3·5 733	112 428·50	7·9 157 785	216 6·1 087	112 431·99	13
14	7·2 267 823	215 5·3 826	110 261·97	8·9 397 301	215 8·1 929	110 265·88	14
15	8·9 556 726	214 5·6 514	108 102·68	11· 151 130	214 9·2 532	108 107·68	15
16	11· 415 437	213 3·6 569	105 952·35	14· 229 044	213 8·1 021	105 958·43	16
17	14· 148 733	211 8·5 928	103 813·43	17· 812 066	212 3·8 730	103 820·33	17
18	12· 563 131	210 0·8 767	101 689·68	16· 159 425	210 6·0 610	101 696·46	18
19	11· 151 716	208 4·8 463	995 83· 793	14· 659 570	208 9·9 015	995 90· 395	19
20	9·9 038 106	207 0·3 430	974 94· 098	13· 305 646	207 5·2 420	975 00· 494	20
21	8·8 087 489	205 7·2 146	954 19· 091	12· 090 838	206 1·9 363	954 25· 252	21
22	7·8 566 457	204 5·3 162	933 57· 410	11· 009 226	204 9·8 455	933 63· 316	22
23	7·0 385 877	203 4·5 090	913 07· 832	10· 054 978	203 8·8 363	913 13· 470	23
24	6·3 454 964	202 4·6 596	892 69· 268	9·2 231 254	202 8·7 813	892 74· 634	24
25	5·7 695 696	201 5·6 408	872 40· 757	8·5 086 738	201 9·5 582	872 45· 853	25
26	5·3 028 036	200 7·3 292	852 21· 458	7·9 074 481	201 1·0 495	852 26· 294	26
27	4·9 381 019	199 9·6 067	832 10· 651	7·4 151 508	200 3·1 420	832 15· 245	27
28	4·6 685 019	199 2·3 589	812 07· 727	7·0 282 551	199 5·7 269	812 12· 103	28
29	4·4 876 113	198 5·4 752	792 12· 185	6·7 434 391	198 8·6 986	792 16· 376	29
30	4·3 893 417	197 8·8 483	772 23· 632	6·5 577 364	198 1·9 552	772 27· 677	30
31	4·3 679 829	197 2·3 740	752 41· 776	6·4 684 530	197 5·3 975	752 45· 722	31
32	4·4 179 796	196 5·9 506	732 66· 423	6·4 730 939	196 8·9 290	732 70· 325	32
33	4·5 341 977	195 9·4 789	712 97· 477	6·5 696 540	196 2·4 559	713 01· 396	33
34	4·7 117 861	195 2·8 615	693 34· 935	6·7 562 343	195 5·8 863	693 38· 940	34
35	4·9 461 435	194 6·0 035	673 78· 886	7·0 313 075	194 9·1 300	673 83· 054	35
36	5·2 328 101	193 8·8 107	654 29· 508	7·3 933 615	194 2·0 987	654 33· 924	36
37	5·5 675 303	193 1·1 908	634 87· 070	7·8 413 694	193 4·7 054	634 91· 825	37
38	5·9 462 976	192 3·0 525	615 51· 924	8·3 742 663	192 6·8 640	615 57· 120	38
39	6·3 652 446	191 4·3 053	596 24· 513	8·9 911 596	191 8·4 897	596 30· 256	39
40	6·8 205 510	190 4·8 595	577 05· 359	9·6 915 462	190 9·4 986	577 11· 766	40
41	7·3 086 927	189 4·6 262	557 95· 072	10· 474 687	189 8·8 070	558 02· 267	41
42	7·8 260 699	188 3·5 169	538 94· 344	11· 340 223	188 9·3 323	539 02· 460	42
43	8·3 692 506	187 1·4 437	520 03· 950	12· 287 681	187 7·9 921	520 13· 128	43
44	8·9 348 112	185 8·3 192	501 24· 747	13· 316 636	186 5·7 044	501 35· 136	44
45	9·5 194 271	184 4·0 564	482 57· 676	14· 426 606	185 2·3 878	482 69· 431	45
46	10· 119 675	182 8·5 688	464 03· 756	15· 617 146	183 7·9 612	464 17· 044	46
47	10· 733 227	181 1·7 709	445 64· 092	16· 887 546	182 2·3 440	445 79· 082	47
48	11· 352 660	179 3·5 781	427 39· 865	18· 236 904	180 5·4 565	427 56· 738	48
49	11· 980 530	177 3·9 068	409 32· 340	19· 664 108	178 7·2 196	409 51· 282	49
50	12· 609 341	175 2·6 753	391 42· 860	21· 167 697	176 7·5 555	391 64· 062	50
51	13· 236 384	172 9·8 038	373 72· 848	22· 745 797	174 6·3 878	373 96· 507	51
52	13· 857 979	170 5·2 151	356 23· 803	24· 395 920	172 3·6 420	356 50· 119	52
53	14· 470 232	167 8·8 356	338 97· 301	26· 115 030	169 9·2 461	339 26· 477	53
54	15· 069 130	165 0·5 959	321 94· 991	27· 899 252	167 3·1 310	322 27· 231	54

TABLE 2 (continued)

4% interest

SELECT				ULTIMATE			
Age [x]	$C_{[x]}$	$M_{[x]}$	$R_{[x]}$	$C_x$	$M_x$	$R_x$	Age $x$
55	15· 650 489	162 0·4 315	305 18· 593	29· 743 892	164 5·2 318	305 54· 100	55
56	16· 209 896	158 8·2 844	288 69· 894	31· 643 194	161 5·4 879	289 08· 868	56
57	16· 742 839	155 4·1 041	272 50· 747	33· 590 294	158 3·8 447	272 93· 380	57
58	17· 244 589	151 7·8 494	256 63· 058	35· 576 898	155 0·2 544	257 09· 536	58
59	17· 710 143	147 9·4 893	241 08· 788	37· 593 298	151 4·6 775	241 59· 281	59
60	18· 134 448	143 9·0 058	225 89· 941	39· 628 125	147 7·0 842	226 44· 604	60
61	18· 512 257	139 6·3 952	211 08· 554	41· 668 139	143 7·4 561	211 67· 520	61
62	18· 838 191	135 1·6 705	196 66· 689	43· 698 194	139 5·7 879	197 30· 063	62
63	19· 106 779	130 4·8 637	182 66· 418	45· 701 021	135 2·0 897	183 34· 276	63
64	19· 312 570	125 6·0 280	169 09· 809	47· 657 146	130 6·3 887	169 82· 186	64
65	19· 450 149	120 5·2 408	155 98· 910	49· 544 810	125 8·7 316	156 75· 797	65
66	19· 514 298	115 2·6 054	143 35· 728	51· 340 028	120 9·1 868	144 17· 065	66
67	19· 500 045	109 8·2 540	131 22· 210	53· 016 515	115 7·8 467	132 07· 879	67
68	19· 402 802	104 2·3 493	119 60· 213	54· 545 971	110 4·8 302	120 54· 362	68
69	19· 218 626	985·08 688	108 51· 487	55· 898 285	105 0·2 843	109 45· 202	69
70	18· 944 269	926·69 620	979 7·6 356	57· 041 926	994·38 597	989 4·9 175	70
71	18· 577 412	867·44 125	880 0·0 931	57· 944 508	937·34 404	900 0·5 315	71
72	18· 116 940	807·62 055	786 0·0 861	58· 573 508	879·39 953	796 3·1 875	72
73	17· 563 064	747·56 578	697 8·6 016	58· 897 169	820·82 603	730 3·7 880	73
74	16· 917 582	687·63 932	615 6·3 509	58· 885 607	761·92 886	626 2·9 619	74
75	16· 184 042	628·23 021	539 3·7 350	58· 512 079	704·40 325	550 1·0 331	75
76	15· 367 944	569·74 871	469 0·8 114	64· 53 117	479 7·9 898	479 7·9 898	76
77	14· 476 809	512·61 880	404 7·2 626	56· 596 645	586·77 674	415 3·4 587	77
78	13· 520 252	457·26 930	346 2·3 705	55· 030 459	530·18 009	356 6·6 819	78
79	12· 509 942	404·12 313	293 4·9 958	53· 056 922	475·14 963	303 6·5 018	79
80	11· 459 433	353·58 526	246 3·5 657	50· 687 819	422·09 271	256 1·3 522	80
				47· 946 787	371·40 489	213 9·2 595	81
				44· 869 945	323·45 811	176 7·8 546	82
				41· 505 962	278·58 816	144 4·3 965	83
				37· 915 345	237·08 220	116 5·8 083	84
				34· 168 847	199·16 685	928·72 613	85
				30· 345 019	164·99 801	729·55 928	86
				26· 526 872	134·65 299	564·56 127	87
				22· 797 854	108·12 612	429·90 828	88
				19· 237 407	85·328 262	321·78 217	89
				15· 916 450	66·090 855	236·45 390	90
				12· 893 258	50·174 405	170·36 305	91
				10· 210 166	37·281 148	120·18 864	92
				7·8 915 333	27·070 981	82·907 496	93
				5·9 432 212	19·179 448	55·836 514	94
				4·3 536 905	13·236 227	36·657 066	95
				3·0 965 854	8·8 825 365	23·420 839	96
				2·1 344 523	5·7 859 511	14·538 303	97
				1·4 230 864	3·6 514 989	8·7 523 514	98
				·91 592 385	2·2 284 124	5·1 008 525	99
				·56 792 853	1·3 124 886	2·8 724 041	100
				·33 856 640	·74 456 006	1·5 599 515	101
				·19 364 137	·40 599 545	·81 539 145	102
				·10 603 525	·21 235 408	·00 939 600	103
				·05 547 277	·10 631 884	·19 704 191	104
				·02 766 740	·05 084 606	·09 072 308	105
				·01 312 805	·02 317 866	·03 987 702	106
				·00 591 380	·01 005 062	·01 669 835	107
				·00 252 389	·00 413 682	·00 664 774	108
				·00 101 842	·00 161 293	·00 251 092	109



TABLE 2 (continued)

4% interest

SELECT

Age [x]	$\ddot{a}_{[x]}$	$A_{[x]}$	$P_{[x]}$	Age [x]	$\ddot{a}_{[x]}$	$A_{[x]}$	$P_{[x]}$
0	24.240	.06769	.00279	55	14.420	.44538	.03089
1	24.187	.06974	.00288	56	14.082	.45837	.03255
2	24.130	.07192	.00298	57	13.742	.47146	.03431
3	24.070	.07424	.00308	58	13.400	.48463	.03617
4	24.006	.07668	.00319	59	13.056	.49786	.03813
5	23.939	.07929	.00331	60	12.710	.51114	.04021
6	23.867	.08202	.00344	61	12.365	.52443	.04241
7	23.792	.08491	.00357	62	12.019	.53772	.04474
8	23.714	.08792	.00371	63	11.674	.55099	.04720
9	23.632	.09108	.00385	64	11.331	.56420	.04979
10	23.546	.09439	.00401	65	10.989	.57734	.05254
11	23.456	.09784	.00417	66	10.650	.59039	.05544
12	23.363	.10143	.00434	67	10.314	.60331	.05850
13	23.266	.10514	.00452	68	9.981	.61610	.06172
14	23.167	.10898	.00470	69	9.653	.62872	.06513
15	23.065	.11288	.00489	70	9.330	.64115	.06872
16	22.963	.11682	.00509	71	9.012	.65337	.07250
17	22.861	.12074	.00528	72	8.701	.66536	.07647
18	22.759	.12465	.00548	73	8.395	.67711	.08065
19	22.652	.12878	.00569	74	8.097	.68858	.08504
20	22.539	.13312	.00591	75	7.806	.69978	.08965
21	22.420	.13769	.00614	76	7.523	.71067	.09447
22	22.295	.14249	.00639	77	7.248	.72124	.09951
23	22.164	.14752	.00666	78	6.981	.73150	.10478
24	22.027	.15280	.00694	79	6.723	.74141	.11027
25	21.884	.15832	.00723	80	6.475	.75098	.11599
26	21.734	.16408	.00755				
27	21.577	.17010	.00788				
28	21.414	.17638	.00824				
29	21.244	.18292	.00861				
30	21.067	.18973	.00901				
31	20.883	.19680	.00942				
32	20.692	.20414	.00987				
33	20.494	.21176	.01033				
34	20.289	.21965	.01083				
35	20.077	.22782	.01135				
36	19.857	.23627	.01190				
37	19.630	.24500	.01248				
38	19.396	.25400	.01310				
39	19.155	.26328	.01375				
40	18.906	.27284	.01443				
41	18.651	.28267	.01516				
42	18.388	.29277	.01592				
43	18.119	.30313	.01673				
44	17.842	.31376	.01759				
45	17.559	.32464	.01849				
46	17.270	.33576	.01944				
47	16.975	.34713	.02045				
48	16.673	.35873	.02152				
49	16.366	.37054	.02264				
50	16.053	.38257	.02383				
51	15.735	.39479	.02509				
52	15.413	.40720	.02642				
53	15.086	.41978	.02783				
54	14.755	.43251	.02931				

TABLE 2 (continued)

4% interest

SELECT

Age [x]	$\ddot{a}_{[x]:\overline{n}}$	$nA_{[x]}$	$A_{[x]:\overline{n}}$	$P_{[x]:\overline{n}}$	n	$\ddot{a}_{[x]:\overline{n}}$	$nA_{[x]}$	$A_{[x]:\overline{n}}$	$P_{[x]:\overline{n}}$	Age [x]
$x+n = 60$					$x+n = 65$					
59	1.000	.00596	.96154	.96154	1	1.000	.00868	.96154	.96154	64
58	1.956	.01302	.92477	.47278	2	1.953	.01948	.92487	.47345	63
57	2.869	.02336	.88964	.31006	3	2.861	.03697	.88997	.31108	62
56	3.739	.03209	.85619	.22899	4	3.719	.05170	.85697	.23044	61
55	4.569	.03940	.82426	.18040	5	4.533	.06403	.82565	.18213	60
54	5.363	.04547	.79372	.14799	6	5.309	.07429	.79582	.14991	59
53	6.124	.05045	.76446	.12483	7	6.049	.08273	.76734	.12685	58
52	6.854	.05448	.73639	.10744	8	6.758	.08960	.74007	.10950	57
51	7.555	.05768	.70941	.09390	9	7.439	.09511	.71390	.09597	56
50	8.230	.06016	.68347	.08305	10	8.093	.09941	.68874	.08511	55
49	8.879	.06200	.65849	.07416	11	8.722	.10268	.66452	.07619	54
48	9.505	.06330	.63444	.06675	12	9.329	.10504	.64117	.06873	53
47	10.108	.06412	.61125	.06047	13	9.915	.10662	.61864	.06239	52
46	10.689	.06454	.58889	.05509	14	10.481	.10751	.59688	.05695	51
45	11.250	.06460	.56732	.05043	15	11.028	.10782	.57584	.05222	50
44	11.791	.06437	.54650	.04635	16	11.557	.10761	.55550	.04807	49
43	12.313	.06388	.52642	.04275	17	12.069	.10697	.53582	.04440	48
42	12.817	.06317	.50704	.03956	18	12.564	.10596	.51678	.04113	47
41	13.303	.06230	.48834	.03671	19	13.043	.10463	.49835	.03821	46
40	13.772	.06127	.47029	.03415	20	13.507	.10304	.48051	.03558	45
39	14.225	.06013	.45288	.03184	21	13.955	.10123	.46325	.03320	44
38	14.662	.05890	.43608	.02974	22	14.390	.09925	.44655	.03103	43
37	15.083	.05761	.41988	.02784	23	14.810	.09711	.43040	.02906	42
36	15.489	.05627	.40426	.02610	24	15.216	.09487	.41477	.02726	41
35	15.881	.05490	.38921	.02451	25	15.609	.09255	.39966	.02561	40
34	16.258	.05351	.37471	.02305	26	15.988	.09016	.38506	.02408	39
33	16.621	.05213	.36074	.02170	27	16.355	.08775	.37095	.02268	38
32	16.971	.05076	.34729	.02046	28	16.709	.08531	.35733	.02138	37
31	17.307	.04942	.33434	.01932	29	17.051	.08288	.34418	.02018	36
30	17.631	.04811	.32189	.01826	30	17.381	.08046	.33148	.01907	35
29	17.942	.04684	.30992	.01727	31	17.700	.07807	.31925	.01804	34
28	18.241	.04562	.29842	.01636	32	18.006	.07573	.30745	.01707	33
27	18.528	.04445	.28737	.01551	33	18.302	.07344	.29609	.01618	32
26	18.804	.04334	.27677	.01472	34	18.586	.07121	.28515	.01534	31
25	19.069	.04230	.26659	.01398	35	18.860	.06904	.27462	.01456	30
24	19.322	.04132	.25683	.01329	36	19.123	.06695	.26450	.01383	29
23	19.565	.04042	.24748	.01265	37	19.376	.06495	.25477	.01315	28
22	19.798	.03959	.23853	.01205	38	19.619	.06303	.24543	.01251	27
21	20.021	.03883	.22996	.01149	39	19.852	.06119	.23646	.01191	26
20	20.234	.03815	.22176	.01096	40	20.076	.05945	.22786	.01135	25
19	20.438	.03754	.21392	.01047	41	20.290	.05780	.21962	.01082	24
18	20.633	.03701	.20644	.01001	42	20.495	.05625	.21173	.01033	23
17	20.818	.03656	.19930	.00957	43	20.691	.05480	.20418	.00987	22
16	21.000	.03595	.19229	.00916	44	20.879	.05344	.19695	.00943	21
15	21.179	.03517	.18540	.00875	45	21.059	.05219	.19005	.00903	20
46	21.230	.05103	.18347	.00864	19					
47	21.393	.04997	.17719	.00828	18					
48	21.549	.04900	.17120	.00794	17					
49	21.702	.04790	.16530	.00762	16					
50	21.854	.04666	.15946	.00730	15					



TABLE 2 (continued)

4% interest

ULTIMATE

Age $x$	$\ddot{a}_x$	$A_x$	$P_x$	Age $x$	$\ddot{a}_x$	$A_x$	$P_x$
0	24.235	.06788	.00280	55	14.327	.44896	.03134
1	24.182	.06992	.00289	56	13.978	.46238	.03308
2	24.126	.07208	.00299	57	13.626	.47594	.03493
3	24.066	.07438	.00309	58	13.270	.48962	.03690
4	24.003	.07682	.00320	59	12.912	.50340	.03899
5	23.935	.07941	.00332	60	12.551	.51726	.04121
6	23.864	.08214	.00344	61	12.189	.53118	.04358
7	23.790	.08501	.00357	62	11.826	.54515	.04610
8	23.711	.08803	.00371	63	11.463	.55913	.04878
9	23.629	.09118	.00386	64	11.099	.57310	.05163
10	23.543	.09449	.00401	65	10.737	.58705	.05468
11	23.454	.09793	.00418	66	10.376	.60094	.05792
12	23.361	.10152	.00435	67	10.016	.61476	.06138
13	23.264	.10525	.00452	68	9.660	.62847	.06506
14	23.163	.10910	.00471	69	9.307	.64206	.06899
15	23.061	.11305	.00490	70	8.957	.65550	.07318
16	22.957	.11703	.00510	71	8.612	.66876	.07765
17	22.854	.12100	.00529	72	8.272	.68183	.08242
18	22.752	.12492	.00549	73	7.938	.69469	.08751
19	22.645	.12905	.00570	74	7.610	.70730	.09294
20	22.532	.13393	.00592	75	7.289	.71966	.09873
21	22.413	.13796	.00616	76	6.975	.73173	.10491
22	22.288	.14276	.00641	77	6.669	.74351	.11149
23	22.157	.14779	.00667	78	6.371	.75498	.11851
24	22.020	.15306	.00695	79	6.081	.76611	.12598
25	21.877	.15857	.00725	80	5.800	.77691	.13394
26	21.727	.16433	.00756	81	5.529	.78735	.14241
27	21.571	.17035	.00790	82	5.267	.79743	.15141
28	21.408	.17662	.00825	83	5.014	.80714	.16097
29	21.238	.18316	.00862	84	4.772	.81648	.17111
30	21.061	.18996	.00902	85	4.539	.82543	.18186
31	20.877	.19704	.00944	86	4.316	.83400	.19324
32	20.686	.20439	.00988	87	4.103	.84219	.20525
33	20.488	.21201	.01035	88	3.900	.84999	.21793
34	20.282	.21991	.01084	89	3.707	.85741	.23128
35	20.069	.22810	.01137	90	3.524	.86446	.24531
36	19.849	.23657	.01192	91	3.350	.87114	.26002
37	19.621	.24533	.01250	92	3.186	.87746	.27541
38	19.386	.25437	.01312	93	3.031	.88342	.29146
39	19.144	.26370	.01377	94	2.885	.88904	.30817
40	18.894	.27331	.01447	95	2.748	.89433	.32550
41	18.637	.28321	.01520	96	2.619	.89929	.34343
42	18.372	.29339	.01597	97	2.498	.90394	.36193
43	18.100	.30385	.01679	98	2.384	.90829	.38093
44	17.821	.31459	.01765	99	2.279	.91236	.40040
45	17.534	.32560	.01857	100	2.180	.91615	.42026
46	17.241	.33687	.01954	101	2.088	.91969	.44045
47	16.941	.34841	.02057	102	2.003	.92298	.46090
48	16.635	.36020	.02165	103	1.923	.92604	.48154
49	16.322	.37223	.02281	104	1.849	.92887	.50227
50	16.003	.38450	.02403	105	1.781	.93150	.52302
51	15.678	.39699	.02532	106	1.718	.93393	.54370
52	15.348	.40969	.02669	107	1.659	.93618	.56423
53	15.012	.42260	.02815	108	1.605	.93826	.58453
54	14.672	.43569	.02970	109	1.555	.94018	.60453

TABLE 2 (continued)

4% interest

ULTIMATE

Age $x$	$\ddot{a}_x: \overline{m}$	$nA_x$	$A_x: \overline{m}$	$P_x: \overline{m}$	$n$	$\ddot{a}_x: \overline{m}$	$nA_x$	$A_x: \overline{m}$	$P_x: \overline{m}$	Age $x$
$x+n = 60$					$x+n = 65$					
59	1.000	.01249	.96154	.96154	1	1.000	.02091	.96154	.96154	64
58	1.950	.02311	.92499	.94728	2	1.943	.03861	.92528	.94730	63
57	2.856	.03208	.89017	.91173	3	2.835	.05533	.89097	.91430	62
56	3.720	.03961	.85693	.87306	4	3.682	.06604	.85838	.87312	61
55	4.547	.04588	.82513	.84148	5	4.489	.07646	.82733	.84249	60
54	5.339	.05105	.79466	.81485	6	5.261	.08506	.79767	.81563	59
53	6.099	.05525	.76543	.78551	7	5.999	.09207	.76926	.78623	58
52	6.829	.05860	.73735	.75735	8	6.708	.09769	.74200	.76067	57
51	7.531	.06122	.71035	.73035	9	7.389	.10211	.71580	.73587	56
50	8.207	.06319	.68436	.70436	10	8.045	.10547	.69058	.71068	55
49	8.857	.06459	.65934	.67934	11	8.677	.10791	.66627	.68627	54
48	9.484	.06551	.63522	.65522	12	9.287	.10956	.64281	.66281	53
47	10.089	.06601	.61196	.63196	13	9.876	.11051	.62016	.64016	52
46	10.672	.06614	.58954	.60954	14	10.445	.11085	.59827	.61727	51
45	11.235	.06597	.56790	.58790	15	10.995	.11068	.57711	.59711	50
44	11.777	.06553	.54703	.56703	16	11.527	.11007	.55664	.57664	49
43	12.301	.06487	.52689	.54689	17	12.042	.10907	.53685	.55685	48
42	12.806	.06402	.50746	.52746	18	12.540	.10776	.51769	.53769	47
41	13.294	.06302	.48871	.50871	19	13.022	.10617	.49916	.51916	46
40	13.764	.06189	.47062	.49062	20	13.488	.10435	.48123	.50568	45
39	14.217	.06067	.45318	.47318	21	13.939	.10235	.46389	.48389	44
38	14.655	.05938	.43635	.45635	22	14.375	.10019	.44711	.46711	43
37	15.077	.05803	.42013	.44013	23	14.797	.09793	.43089	.45089	42
36	15.483	.05664	.40449	.42449	24	15.205	.09557	.41521	.43521	41
35	15.875	.05524	.38943	.40943	25	15.599	.09315	.40005	.42005	40
34	16.252	.05384	.37491	.39491	26	15.980	.09068	.38540	.40540	39
33	16.616	.05244	.36094	.38094	27	16.347	.08820	.37126	.39126	38
32	16.965	.05106	.34748	.36748	28	16.702	.08572	.35761	.37761	37
31	17.302	.04970	.33454	.35454	29	17.045	.08324	.34443	.36443	36
30	17.626	.04839	.32209	.34209	30	17.375	.08080	.33172	.35172	35
29	17.937	.04712	.31012	.33012	31	17.694	.07839	.31947	.33947	34
28	18.236	.04590	.29862	.31862	32	18.001	.07603	.30767	.32767	33
27	18.523	.04474	.28758	.30758	33	18.296	.07372	.29630	.31630	32
26	18.799	.04363	.27698	.29698	34	18.581	.07148	.28536	.30536	31
25	19.063	.04259	.26681	.28681	35	18.854	.06932	.27483	.29483	30
24	19.316	.04162	.25706	.27706	36	19.118	.06723	.26471	.28471	29
23	19.559	.04072	.24771	.26771	37	19.370	.06523	.25499	.27499	28
22	19.792	.03989	.23876	.25876	38	19.613	.06331	.24565	.26565	27
21	20.015	.03913	.23020	.25020	39	19.846	.06148	.23669	.25669	26
20	20.228	.03845	.22200	.24200	40	20.070	.05974	.22810	.24810	25
19	20.432	.03784	.21417	.23417	41	20.284	.05810	.21986	.23986	24
18	20.626	.03731	.20668	.22668	42	20.489	.05655	.21197	.23197	23
17	20.812	.03685	.19954	.21954	43	20.685	.05510	.20442	.22442	22
16	20.995	.03618	.19249	.21249	44	20.873	.05374	.19720	.21720	21
15	21.176	.03536	.18556	.20556	45	21.052	.05248	.19031	.21031	20
46	21.223	.05132	.18372	.20372	46	21.223	.05132	.18372	.20372	19
47	21.387	.05026	.17744	.19744	47	21.387	.05026	.17744	.19744	18
48	21.542	.04929	.17145	.19145	48	21.542	.04929	.17145	.19145	17
49	21.697	.04813	.16550	.18550	49	21.697	.04813	.16550	.18550	16
50	21.850	.04684	.15962	.17962	50	21.850	.04684	.15962	.17962	15

TABLE 2 (continued)

4% interest

MULTIPLE LIFE FUNCTIONS

Age	$D_{xx}$	$N_{xx}$	$\ddot{a}_{xx}$	$\ddot{a}_{[xx]}$	$\ddot{a}_{xxx}$	$\ddot{a}_{xxxx}$	Age
10	230 54-255	524 240-96	22-739	22-744	22-149	21-662	10
11	221 51-152	501 186-70	22-626	22-630	22-019	21-520	11
12	212 83-426	479 035-55	22-507	22-512	21-884	21-372	12
13	204 49-692	457 752-12	22-384	22-390	21-743	21-219	13
14	196 47-438	437 302-43	22-257	22-264	21-599	21-061	14
15	188 74-013	417 654-99	22-129	22-137	21-453	20-903	15
16	181 25-956	398 780-98	22-001	22-011	21-310	20-749	16
17	174 00-580	380 655-02	21-876	21-889	21-174	20-606	17
18	166 96-030	363 254-44	21-757	21-770	21-048	20-477	18
19	160 21-886	346 558-41	21-630	21-644	20-912	20-337	19
20	153 76-667	330 536-53	21-496	21-509	20-767	20-186	20
21	147 58-966	315 159-86	21-354	21-367	20-613	20-024	21
22	141 67-445	300 400-89	21-204	21-217	20-449	19-852	22
23	136 00-827	286 233-45	21-045	21-058	20-275	19-669	23
24	130 57-899	272 632-62	20-879	20-892	20-092	19-475	24
25	125 37-507	259 574-70	20-704	20-716	19-899	19-269	25
26	120 38-549	247 037-22	20-521	20-533	19-696	19-053	26
27	115 59-975	234 998-67	20-329	20-341	19-483	18-826	27
28	111 00-786	223 438-69	20-128	20-140	19-260	18-587	28
29	106 60-028	212 337-91	19-919	19-931	19-028	18-338	29
30	102 36-789	201 677-88	19-701	19-713	18-785	18-079	30
31	983 0-2 025	191 441-09	19-475	19-486	18-533	17-808	31
32	943 9-4 371	181 610-89	19-240	19-251	18-271	17-528	32
33	906 3-7 007	172 171-45	18-996	19-008	17-999	17-237	33
34	870 2-2 359	163 107-75	18-743	18-758	17-719	16-936	34
35	835 4-3 183	154 405-51	18-482	18-495	17-429	16-626	35
36	801 9-2 555	146 051-20	18-213	18-227	17-130	16-307	36
37	769 6-3 850	138 031-94	17-935	17-950	16-822	15-979	37
38	738 5-0 728	130 335-55	17-649	17-666	16-506	15-643	38
39	708 4-7 124	122 950-48	17-354	17-374	16-182	15-299	39
40	679 4-7 234	115 865-77	17-052	17-074	15-850	14-947	40
41	651 4-5 505	109 071-05	16-743	16-768	15-511	14-589	41
42	624 3-6 624	102 556-50	16-426	16-454	15-166	14-225	42
43	598 1-5 514	963 12-833	16-102	16-135	14-813	13-855	43
44	572 7-7 324	903 31-282	15-771	15-809	14-456	13-481	44
45	548 1-7 428	846 03-549	15-434	15-477	14-092	13-102	45
46	524 3-1 420	791 21-807	15-091	15-140	13-724	12-720	46
47	501 1-5 113	738 78-665	14-742	14-799	13-352	12-335	47
48	478 6-4 540	688 67-153	14-388	14-453	12-976	11-948	48
49	456 7-5 960	640 80-699	14-029	14-104	12-598	11-559	49

TABLE 2 (continued)

4% interest

MULTIPLE LIFE FUNCTIONS

Age	$D_{xx}$	$N_{xx}$	$\ddot{a}_{xx}$	$\ddot{a}_{[xx]}$	$\ddot{a}_{xxx}$	$\ddot{a}_{xxxx}$	Age
50	435 4-5 857	595 13-103	13-667	13-751	12-217	11-171	50
51	414 7-0 953	551 58-518	13-301	13-396	11-835	10-783	51
52	394 4-8 212	510 11-422	12-931	13-039	11-452	10-396	52
53	374 7-4 856	470 66-601	12-560	12-680	11-070	10-011	53
54	355 4-8 379	433 19-116	12-186	12-321	10-687	9-629	54
55	336 6-6 558	397 64-278	11-811	11-962	10-307	9-251	55
56	318 2-7 480	363 97-622	11-436	11-603	9-928	8-877	56
57	300 2-9 555	332 14-874	11-061	11-246	9-553	8-508	57
58	282 7-1 537	302 11-918	10-686	10-890	9-181	8-145	58
59	265 5-2 552	273 84-765	10-313	10-538	8-814	7-788	59
60	248 7-2 117	247 29-510	9-943	10-188	8-452	7-439	60
61	232 3-0 160	222 42-298	9-575	9-843	8-095	7-097	61
62	216 2-7 040	199 19-282	9-210	9-502	7-745	6-764	62
63	200 6-3 563	177 56-578	8-850	9-167	7-402	6-440	63
64	185 4-0 990	157 50-222	8-495	8-837	7-067	6-125	64
65	170 6-1 037	138 96-123	8-145	8-514	6-739	5-820	65
66	156 2-5 867	121 90-019	7-801	8-198	6-421	5-525	66
67	142 3-8 067	106 27-432	7-464	7-890	6-111	5-241	67
68	129 0-0 608	920 3-6 255	7-134	7-590	5-811	4-967	68
69	116 1-6 793	791 3-5 647	6-812	7-298	5-521	4-704	69
70	103 9-0 172	675 1-8 854	6-498	7-014	5-241	4-452	70
71	922-44 485	571 2-8 682	6-193	6-740	4-972	4-211	71
72	812-33 548	479 0-4 233	5-897	6-476	4-713	3-981	72
73	709-05 081	397 8-0 879	5-610	6-220	4-465	3-763	73
74	612-92 481	326 9-0 371	5-334	5-975	4-227	3-555	74
75	524-24 609	265 6-1 122	5-067	5-740	4-000	3-358	75
76	443-23 962	213 1-8 662	4-810	5-515	3-784	3-172	76
77	370-04 897	168 8-6 265	4-563	5-299	3-579	2-997	77
78	304-72 013	131 8-5 776	4-327	5-094	3-385	2-831	78
79	247-18 848	101 3-8 574	4-102	4-899	3-201	2-676	79
80	197-27 014	766-66 895	3-886	4-713	3-027	2-531	80
81	154-65 931	569-39 881	3-682		2-863	2-394	81
82	118-93 228	414-73 950	3-487		2-709	2-267	82
83	89-559 029	295-80 722	3-303		2-564	2-149	83
84	65-921 727	206-24 819	3-129		2-429	2-039	84
85	47-339 707	140-32 646	2-964		2-302	1-936	85
86	33-098 686	92-986 754	2-809		2-184	1-842	86
87	22-481 984	59-888 068	2-664		2-075	1-755	87
88	14-800 829	37-406 084	2-527		1-973	1-674	88
89	9-4 208 615	22-605 255	2-399		1-878	1-601	89
90	5-7 824 207	13-184 393	2-280		1-791	1-533	90



TABLE 3

POPULATION LIFE TABLE: ENGLISH LIFE TABLE  
No. 12—Males

Age $x$	$l_x$	$d_x$	$p_x$	$q_x$	$\mu_x$	$e_x$	Age $x$
0	100 000	2 449	.97551	.02449		68.09	0
1	97 551	153	.99843	.00157	.00210	68.80	1
2	97 398	96	.99901	.00099	.00134	67.90	2
3	97 302	67	.99931	.00069	.00079	66.97	3
4	97 235	60	.99938	.00062	.00063	66.02	4
5	97 175	55	.99943	.00057	.00059	65.06	5
6	97 120	51	.99948	.00052	.00054	64.09	6
7	97 069	47	.99952	.00048	.00050	63.13	7
8	97 022	43	.99956	.00044	.00046	62.16	8
9	96 979	40	.99959	.00041	.00043	61.18	9
10	96 939	38	.99961	.00039	.00040	60.21	10
11	96 901	37	.99962	.00038	.00039	59.23	11
12	96 864	37	.99962	.00038	.00038	58.25	12
13	96 827	40	.99959	.00041	.00039	57.28	13
14	96 787	45	.99953	.00047	.00043	56.30	14
15	96 742	57	.99941	.00059	.00052	55.33	15
16	96 685	75	.99922	.00078	.00067	54.36	16
17	96 610	96	.99901	.00099	.00089	53.40	17
18	96 514	108	.99888	.00112	.00107	52.45	18
19	96 406	113	.99883	.00117	.00115	51.51	19
20	96 293	115	.99881	.00119	.00119	50.57	20
21	96 178	113	.99882	.00118	.00119	49.63	21
22	96 065	110	.99886	.00114	.00116	48.69	22
23	95 955	104	.99892	.00108	.00112	47.74	23
24	95 851	98	.99898	.00102	.00105	46.80	24
25	95 753	95	.99901	.00099	.00100	45.84	25
26	95 658	94	.99902	.00098	.00098	44.89	26
27	95 564	96	.99900	.00100	.00099	43.93	27
28	95 468	99	.99896	.00104	.00102	42.98	28
29	95 369	104	.99891	.00109	.00106	42.02	29
30	95 265	110	.99885	.00115	.00112	41.06	30
31	95 155	115	.99879	.00121	.00118	40.11	31
32	95 040	122	.99872	.00128	.00125	39.16	32
33	94 918	129	.99864	.00136	.00132	38.21	33
34	94 789	137	.99855	.00145	.00140	37.26	34
35	94 652	147	.99845	.00155	.00150	36.31	35
36	94 505	158	.99833	.00167	.00161	35.37	36
37	94 347	171	.99819	.00181	.00174	34.43	37
38	94 176	185	.99804	.00196	.00189	33.49	38
39	93 991	201	.99786	.00214	.00205	32.55	39
40	93 790	220	.99765	.00235	.00224	31.62	40
41	93 570	242	.99741	.00259	.00246	30.70	41
42	93 328	268	.99713	.00287	.00273	29.77	42
43	93 060	297	.99681	.00319	.00303	28.86	43
44	92 763	330	.99644	.00356	.00337	27.95	44
45	92 433	369	.99601	.00399	.00377	27.05	45
46	92 064	412	.99552	.00448	.00423	26.15	46
47	91 652	463	.99495	.00505	.00476	25.27	47
48	91 189	520	.99430	.00570	.00538	24.40	48
49	90 669	584	.99356	.00644	.00607	23.53	49
50	90 085	656	.99272	.00728	.00687	22.68	50
51	89 429	736	.99177	.00823	.00777	21.84	51
52	88 693	825	.99070	.00930	.00878	21.02	52
53	87 868	923	.98949	.01051	.00993	20.21	53
54	86 945	1 029	.98816	.01184	.01121	19.42	54

TABLE 3 (continued)

Age $x$	$l_x$	$d_x$	$p_x$	$q_x$	$\mu_x$	$e_x$	Age $x$
55	85 916	1 144	.98669	.01331	.01263	18.65	55
56	84 772	1 265	.98508	.01492	.01420	17.89	56
57	83 507	1 393	.98332	.01668	.01590	17.16	57
58	82 114	1 526	.98141	.01859	.01776	16.44	58
59	80 588	1 664	.97935	.02065	.01978	15.74	59
60	78 924	1 805	.97713	.02287	.02197	15.06	60
61	77 119	1 947	.97475	.02525	.02433	14.40	61
62	75 172	2 088	.97222	.02778	.02684	13.76	62
63	73 084	2 228	.96951	.03049	.02953	13.14	63
64	70 856	2 366	.96661	.03339	.03243	12.54	64
65	68 490	2 499	.96352	.03648	.03553	11.95	65
66	65 991	2 625	.96022	.03978	.03884	11.39	66
67	63 366	2 745	.95668	.04332	.04239	10.84	67
68	60 621	2 856	.95288	.04712	.04622	10.31	68
69	57 765	2 959	.94878	.05122	.05036	9.79	69
70	54 806	3 051	.94434	.05566	.05487	9.29	70
71	51 755	3 130	.93953	.06047	.05976	8.81	71
72	48 625	3 195	.93430	.06570	.06509	8.35	72
73	45 430	3 243	.92861	.07139	.07092	7.90	73
74	42 187	3 273	.92241	.07759	.07730	7.47	74
75	38 914	3 282	.91566	.08434	.08432	7.05	75
76	35 632	3 266	.90833	.09167	.09200	6.66	76
77	32 366	3 225	.90037	.09963	.10042	6.28	77
78	29 141	3 154	.89176	.10824	.10962	5.92	78
79	25 987	3 054	.88248	.11752	.11964	5.57	79
80	22 933	2 923	.87253	.12747	.13053	5.25	80
81	20 010	2 763	.86192	.13808	.14231	4.94	81
82	17 247	2 576	.85066	.14934	.15503	4.66	82
83	14 671	2 365	.83878	.16122	.16863	4.39	83
84	12 306	2 137	.82634	.17366	.18311	4.14	84
85	10 169	1 897.4	.81341	.18659	.19849	3.90	85
86	8 271.6	1 654.1	.80003	.19997	.21468	3.68	86
87	6 617.5	1 414.1	.78631	.21369	.23165	3.48	87
88	5 203.4	1 184.6	.77235	.22765	.24928	3.30	88
89	4 018.8	971.6	.75823	.24177	.26748	3.13	89
90	3 047.2	779.9	.74407	.25593	.28616	2.97	90
91	2 267.3	612.2	.72997	.27003	.30518	2.83	91
92	1 655.1	470.0	.71604	.28396	.32429	2.70	92
93	1 185.1	352.73	.70236	.29764	.34372	2.58	93
94	832.37	258.83	.68904	.31096	.36294	2.47	94
95	573.54	185.74	.67615	.32385	.38197	2.38	95
96	387.80	130.39	.66377	.33623	.40066	2.29	96
97	257.41	89.59	.65194	.34806	.41886	2.21	97
98	167.82	60.30	.64071	.35929	.43651	2.14	98
99	107.52	39.771	.63011	.36989	.45354	2.07	99
100	67.749	25.733	.62017	.37983	.46972	2.00	100
101	42.016	16.349	.61088	.38912	.48512		101
102	25.667	10.209	.60224	.39776	.49967		102
103	15.458	6.2721	.59425	.40575	.51335		103
104	9.1859	3.7949	.58688	.41312			104
105	5.3910						105



TABLE 3 (continued)

4% interest

Age $x$	$D_x$	$\bar{N}_x$	$\bar{C}_x$	$\bar{M}_x$	$\bar{R}_x$	Age $x$
1	93 799	2 190 962	144.3	7 867.9	441 230.1	1
2	90 050	2 099 056	87.4	7 723.6	433 362.2	2
3	86 501	2 010 796	58.2	7 636.2	425 638.6	3
4	83 117	1 925 999	50.2	7 578.0	418 002.4	4
5	79 871	1 844 516	45.0	7 527.8	410 424.4	5
6	76 755	1 766 215	39.6	7 482.8	402 896.6	6
7	73 764	1 690 965	34.6	7 443.2	395 413.8	7
8	70 893	1 618 645	31.0	7 408.6	387 970.6	8
9	68 136	1 549 140	26.9	7 377.6	380 562.0	9
10	65 489	1 482 337	25.7	7 350.7	373 184.4	10
11	62 945	1 418 129	23.5	7 325.0	365 833.7	11
12	60 501	1 356 414	22.5	7 301.5	358 508.7	12
13	58 152	1 297 095	23.8	7 279.0	351 207.2	13
14	55 892	1 240 080	25.8	7 255.2	343 928.2	14
15	53 717	1 185 282	30.5	7 229.4	336 673.0	15
16	51 621	1 132 620	39.3	7 198.9	329 443.6	16
17	49 597	1 082 016	48.4	7 159.6	322 244.7	17
18	47 642	1 033 403	52.6	7 111.2	315 085.1	18
19	45 758	986 708	52.1	7 058.6	307 973.9	19
20	43 947	941 862	51.7	7 006.5	300 915.3	20
21	42 206	898 791	48.6	6 954.8	293 908.8	21
22	40 535	857 426	45.9	6 906.2	286 954.0	22
23	38 931	817 699	40.4	6 860.3	280 047.8	23
24	37 394	779 541	37.6	6 819.9	273 187.5	24
25	35 919	742 891	35.2	6 782.3	266 367.6	25
26	34 503	707 684	33.6	6 747.1	259 585.3	26
27	33 143	673 866	32.9	6 713.5	252 838.2	27
28	31 836	641 381	32.1	6 680.6	246 124.7	28
29	30 580	610 176	32.5	6 648.5	239 444.1	29
30	29 372	580 204	33.0	6 616.0	232 795.6	30
31	28 210	551 417	33.6	6 583.0	226 179.6	31
32	27 092	523 770	34.7	6 549.4	219 596.6	32
33	26 016	497 219	34.0	6 514.7	213 047.2	33
34	24 982	471 723	35.9	6 480.7	206 532.5	34
35	23 986	447 243	36.1	6 444.8	200 051.8	35
36	23 028	423 738	38.1	6 408.7	193 607.0	36
37	22 105	401 175	39.5	6 370.6	187 198.3	37
38	21 216	379 517	40.8	6 331.1	180 827.7	38
39	20 360	358 731	42.7	6 290.3	174 496.6	39
40	19 535	338 786	44.5	6 247.6	168 206.3	40
41	18 740	319 650	47.1	6 203.1	161 958.7	41
42	17 973	301 296	50.8	6 156.0	155 755.6	42
43	17 232	283 696	54.2	6 105.2	149 599.6	43
44	16 516	266 824	57.9	6 051.0	143 494.4	44
45	15 824	250 656	61.6	5 993.1	137 443.4	45
46	15 155	235 168	66.3	5 931.5	131 450.3	46
47	14 507	220 339	72.5	5 865.2	125 518.8	47
48	13 878	206 148	76.7	5 792.7	119 653.6	48
49	13 269	192 576	84.2	5 716.0	113 860.9	49

TABLE 3 (continued)

4% interest

Age $x$	$D_x$	$\bar{N}_x$	$\bar{C}_x$	$\bar{M}_x$	$\bar{R}_x$	Age $x$
50	12 676	179 605	90.2	5 631.8	108 144.9	50
51	12 100	167 218	97.5	5 541.6	102 513.1	51
52	11 539	155 400	105.2	5 444.1	96 971.5	52
53	10 992	144 136	113.4	5 338.9	91 527.4	53
54	10 458	133 412	121.4	5 225.5	86 188.5	54
55	9 936.7	123 216	129.7	5 104.1	80 963.0	55
56	9 427.3	113 535	138.0	4 974.4	75 858.9	56
57	8 929.4	104 358	146.0	4 836.0	70 884.5	57
58	8 442.7	95 672.6	153.8	4 690.4	66 048.1	58
59	7 967.2	87 468.5	161.3	4 536.6	61 357.7	59
60	7 502.5	79 734.6	168.2	4 375.3	56 821.1	60
61	7 049.0	72 459.7	174.5	4 207.1	52 445.8	61
62	6 606.8	65 632.8	179.9	4 032.6	48 238.7	62
63	6 176.2	59 242.3	184.6	3 852.7	44 206.1	63
64	5 757.6	53 276.4	188.5	3 668.1	40 353.4	64
65	5 351.3	47 723.0	191.5	3 479.6	36 685.3	65
66	4 957.7	42 569.5	193.4	3 288.1	33 205.7	66
67	4 577.4	37 803.1	194.4	3 094.7	29 917.6	67
68	4 210.7	33 410.1	194.5	2 900.3	26 822.9	68
69	3 858.0	29 376.9	193.8	2 705.8	23 922.6	69
70	3 519.6	25 689.3	192.1	2 512.0	21 216.8	70
71	3 195.8	22 332.8	189.5	2 319.9	18 704.8	71
72	2 887.1	19 292.6	186.0	2 130.4	16 384.9	72
73	2 593.6	16 553.6	181.5	1 944.4	14 254.5	73
74	2 315.8	14 100.1	176.31	1 762.9	12 310.1	74
75	2 054.0	11 916.5	169.87	1 586.59	10 547.2	75
76	1 808.4	9 986.67	162.52	1 416.72	8 960.61	76
77	1 579.5	8 294.09	154.37	1 254.20	7 543.89	77
78	1 367.4	6 822.05	145.14	1 099.83	6 289.69	78
79	1 172.5	5 553.50	135.12	954.69	5 189.86	79
80	994.93	4 471.22	124.38	819.57	4 235.17	80
81	834.73	3 557.84	113.05	695.19	3 415.60	81
82	691.80	2 796.00	101.35	582.14	2 720.41	82
83	565.84	2 168.59	89.48	480.79	2 138.27	83
84	456.37	1 658.82	77.751	391.31	1 657.48	84
85	362.61	1 250.61	66.372	313.559	1 266.17	85
86	283.61	928.677	55.642	247.187	952.611	86
87	218.17	678.864	45.745	191.545	705.424	87
88	164.95	488.263	36.846	145.800	513.879	88
89	122.50	345.372	29.064	108.954	368.079	89
90	89.310	240.177	22.432	79.890	259.125	90
91	63.896	164.163	16.9339	57.458	179.235	91
92	44.849	110.265	12.5002	40.5241	121.777	92
93	30.878	72.7745	9.0209	28.0239	81.2529	93
94	20.854	47.1948	6.3654	19.0030	53.2290	94
95	13.817	30.0737	4.3934	12.6376	34.2260	95
96	8.9827	18.8297	2.9652	8.2442	21.5884	96
97	5.7331	11.5823	1.9593	5.2790	13.3442	97
98	3.5940	6.9951	1.2679	3.3197	8.0652	98
99	2.2141	4.1426	.8044	2.0518	4.7455	99
100	1.3414	2.3989	.5003	1.2474	2.6937	100



TABLE 4

ANNUITY TABLE:  $a(55)$  Males and Females

MORTALITY FUNCTIONS (FEMALES)

Age $x$	SELECT			ULTIMATE				Age $x$
	$q_x$	$e_x$	$l_x$	$l_x$	$\mu_x$	$d_x$	$q_x$	
60	-00513	21-144	893 918	897 001	-00819	7 669	-00855	60
61	-00563	20-330	885 969	889 332	-00900	8 351	-00939	61
62	-00619	19-526	877 320	880 981	-00989	9 092	-01032	62
63	-00682	18-733	867 895	871 889	-01088	9 913	-01137	63
64	-00752	17-953	857 616	861 976	-01200	10 809	-01254	64
65	-00831	17-185	846 412	851 167	-01326	11 789	-01385	65
66	-00919	16-430	834 193	839 378	-01466	12 851	-01531	66
67	-01017	15-690	820 865	826 527	-01623	14 010	-01695	67
68	-01126	14-965	806 345	812 517	-01799	15 251	-01877	68
69	-01248	14-256	790 549	797 266	-01995	16 583	-02080	69
70	-01384	13-563	773 377	780 683	-02214	18 010	-02307	70
71	-01535	12-887	754 741	762 673	-02459	19 517	-02559	71
72	-01703	12-229	734 568	743 156	-02731	21 098	-02839	72
73	-01891	11-590	712 785	722 058	-03035	22 752	-03151	73
74	-02099	10-970	689 313	699 306	-03375	24 462	-03498	74
75	-02329	10-370	664 120	674 844	-03753	26 191	-03881	75
76	-02609	9-788	637 350	648 653	-04172	27 931	-04306	76
77	-02923	9-226	608 873	620 722	-04639	29 646	-04776	77
78	-03272	8-686	578 715	591 076	-05158	31 297	-05295	78
79	-03660	8-167	549 961	559 779	-05732	32 837	-05866	79
80	-04092	7-669	513 739	526 942	-06369	34 225	-06495	80
81	-04591	7-192	479 326	492 717	-07073	35 397	-07184	81
82	-05144	6-736	443 850	457 320	-07850	36 302	-07938	82
83	-05755	6-302	407 594	421 018	-08705	36 881	-08760	83
84	-06431	5-890	370 897	384 137	-09646	37 092	-09656	84
85	-07174	5-500	334 132	347 045	-10679	36 884	-10628	85
86	-07988	5-131	297 722	310 161	-11810	36 221	-11678	86
87	-08876	4-782	262 120	273 940	-13043	35 086	-12808	87
88	-09843	4-455	227 785	238 854	-14387	33 490	-14021	88
89	-10890	4-147	195 163	205 364	-15845	31 454	-15316	89
90	-12020	3-859	164 670	173 910	-17424	29 033	-16694	90
91	-13069	3-596	136 407	144 877	-19126	26 297	-18151	91
92	-14172	3-352	110 965	118 580	-20953	23 341	-19684	92
93	-15328	3-126	88 535	95 239	-22908	20 275	-21289	93
94	-16531	2-916	69 190	74 964	-24991	17 212	-22960	94
95	-17775	2-723	52 896	57 752	-27200	14 258	-24688	95
96	-19055	2-544	39 512	43 494	-29530	11 511	-26465	96
97	-20362	2-379	28 803	31 983	-31976	9 045	-28280	97
98	-21689	2-228	20 467	22 938	-34531	6 910	-30124	98
99	-23028	2-087	14 164	16 028	-37183	5 126	-31983	99
100				10 902	-39922	3 690	-33846	100
101				7 212	-427	2 575	-357	101
102				4 637	-456	1 744	-376	102
103				2 893	-488	1 146	-396	103
104				1 747	-521	728	-417	104

TABLE 4 (continued)

MONETARY FUNCTIONS: 4% (FEMALES)

Age $x$	$q_x$	$D_x$	$N_x$	$a_x$	Age $x$
60	13-340	85 269	1 218 809	13-294	60
61	12-994	81 289	1 133 540	12-945	61
62	12-643	77 428	1 052 251	12-590	62
63	12-286	73 682	974 823	12-230	63
64	11-926	70 042	901 141	11-866	64
65	11-562	66 504	831 099	11-497	65
66	11-194	63 060	764 595	11-125	66
67	10-824	59 707	701 535	10-750	67
68	10-452	56 437	641 828	10-372	68
69	10-079	53 248	585 391	9-994	69
70	9-705	50 135	532 143	9-614	70
71	9-332	47 095	482 008	9-235	71
72	8-960	44 124	434 913	8-857	72
73	8-590	41 223	390 789	8-480	73
74	8-224	38 388	349 566	8-106	74
75	7-861	35 621	311 178	7-736	75
76	7-501	32 921	275 557	7-370	76
77	7-146	30 292	242 636	7-010	77
78	6-798	27 736	212 344	6-656	78
79	6-457	25 257	184 608	6-309	79
80	6-124	22 861	159 351	5-971	80
81	5-798	20 554	136 490	5-641	81
82	5-482	18 344	115 936	5-320	82
83	5-175	16 238	97 592	5-010	83
84	4-879	14 246	81 354	4-711	84
85	4-594	12 375	67 108	4-423	85
86	4-320	10 635	54 733	4-147	86
87	4-058	9 031-4	44 098	3-883	87
88	3-808	7 571-8	35 067	3-632	88
89	3-570	6 259-8	27 495	3-393	89
90	3-344	5 097-1	21 235	3-167	90
91	3-137	4 082-9	16 138	2-953	91
92	2-941	3 213-2	12 055	2-753	92
93	2-758	2 481-5	8 842	2-564	93
94	2-587	1 878-1	6 360	2-388	94
95	2-428	1 391-2	4 482	2-224	95
96	2-280	1 007-5	3 091	2-071	96
97	2-142	712-3	2 084	1-929	97
98	2-014	491-2	1 371	1-797	98
99	1-895	330-0	880	1-674	99
100		215-9	550	1-560	100
101		137-3	334	1-453	101
102		84-9	197	1-350	102
103		50-9	112	1-249	103
104		29-6	61	1-151	104



TABLE 4 (continued)

## MORTALITY FUNCTIONS (MALES)

Age $x$	SELECT			ULTIMATE				Age $x$
	$q_{[x]}$	$e_{[x]}$	$l_{[x]}$	$l_x$	$\mu_x$	$d_x$	$q_x$	
60	-00841	17.520	855 051	859 916	-01344	12 056	-01402	60
61	-00928	16.773	842 571	847 860	-01482	13 108	-01546	61
62	-01024	16.041	829 000	834 752	-01637	14 241	-01706	62
63	-01130	15.323	814 262	820 511	-01808	15 450	-01883	63
64	-01248	14.622	798 279	805 061	-01998	16 745	-02080	64
65	-01378	13.936	780 970	788 316	-02209	18 108	-02297	65
66	-01523	13.268	762 269	770 208	-02443	19 548	-02538	66
67	-01682	12.617	742 101	750 660	-02702	21 041	-02803	67
68	-01858	11.984	720 415	729 619	-02989	22 589	-03096	68
69	-02052	11.370	697 156	707 030	-03307	24 180	-03420	69
70	-02266	10.774	672 300	682 850	-03658	25 784	-03776	70
71	-02502	10.199	645 825	657 066	-04047	27 400	-04170	71
72	-02761	9.643	617 745	629 666	-04478	28 977	-04602	72
73	-03045	9.107	588 112	600 689	-04952	30 485	-05075	73
74	-03357	8.592	556 999	570 204	-05474	31 903	-05595	74
75	-03698	8.098	524 517	538 301	-06050	33 181	-06164	75
76	-04112	7.622	491 034	505 120	-06684	34 277	-06786	76
77	-04567	7.166	456 555	470 843	-07381	35 139	-07463	77
78	-05067	6.731	421 330	435 704	-08143	35 723	-08199	78
79	-05615	6.317	385 645	399 981	-08979	35 990	-08998	79
80	-06212	5.923	349 829	363 991	-09891	35 893	-09861	80
81	-06898	5.547	314 365	328 098	-10887	35 418	-10795	81
82	-07645	5.192	279 519	292 680	-11973	34 530	-11798	82
83	-08458	4.856	245 697	258 150	-13151	33 234	-12874	83
84	-09339	4.539	213 296	224 916	-14428	31 540	-14023	84
85	-10291	4.241	182 695	193 376	-15807	29 482	-15246	85
86	-11314	3.961	154 234	163 894	-17293	27 110	-16541	86
87	-12412	3.698	128 198	136 784	-18889	24 498	-17910	87
88	-13581	3.453	104 795	112 286	-20599	21 723	-19346	88
89	-14824	3.223	84 158	90 563	-22421	18 881	-20849	89
90	-16137	3.009	66 318	71 682	-24360	16 066	-22413	90
91	-17303	2.818	51 090	55 616	-26414	13 366	-24032	91
92	-18503	2.640	38 519	42 250	-28580	10 858	-25699	92
93	-19732	2.477	28 391	31 392	-30852	8 603	-27405	93
94	-20983	2.326	20 436	22 789	-33225	6 641	-29143	94
95	-22250	2.186	14 351	16 148	-35695	4 990	-30903	95
96	-23525	2.058	9 823	11 158	-38256	3 646	-32673	96
97	-24800	1.941	6 548	7 512	-40896	2 588	-34445	97
98	-26070	1.832	4 249	4 924	-43594	1 783	-36209	98
99	-27325	1.731	2 682	3 141	-46333	1 192	-37952	99
100				1 949	-49106	773	-39668	100
101				1 176	-519	487	-414	101
102				689	-550	298	-432	102
103				391	-582	176	-450	103
104				215	-620	101	-469	104

TABLE 4 (continued)

## MONETARY FUNCTIONS: 4% (MALES)

Age $x$	$a_{[x]}$	$D_x$	$N_x$	$a_x$	Age $x$
60	11.691	81 744	1 032 009	11.625	60
61	11.333	77 498	950 265	11.262	61
62	10.972	73 365	872 767	10.896	62
63	10.610	69 340	799 402	10.529	63
64	10.246	65 418	730 062	10.160	64
65	9.883	61 593	664 644	9.791	65
66	9.520	57 864	603 051	9.422	66
67	9.158	54 226	545 187	9.054	67
68	8.799	50 679	490 961	8.688	68
69	8.442	47 221	440 282	8.324	69
70	8.088	43 852	393 061	7.963	70
71	7.739	40 573	349 209	7.607	71
72	7.395	37 386	308 636	7.255	72
73	7.057	34 294	271 250	6.910	73
74	6.726	31 301	236 956	6.570	74
75	6.402	28 414	205 655	6.238	75
76	6.083	25 637	177 241	5.914	76
77	5.773	22 978	151 604	5.598	77
78	5.472	20 445	128 626	5.291	78
79	5.180	18 047	108 181	4.994	79
80	4.898	15 791	90 134	4.708	80
81	4.625	13 687	74 343	4.432	81
82	4.363	11 740	60 656	4.167	82
83	4.111	9 956.5	48 916	3.913	83
84	3.871	8 341.0	38 960	3.671	84
85	3.642	6 895.6	30 619	3.440	85
86	3.423	5 619.5	23 723	3.222	86
87	3.217	4 509.6	18 104	3.015	87
88	3.021	3 559.5	13 594	2.819	88
89	2.836	2 760.5	10 034	2.635	89
90	2.662	2 100.9	7 274	2.463	90
91	2.505	1 567.3	5 173	2.301	91
92	2.358	1 144.9	3 606	2.150	92
93	2.222	817.9	2 461	2.009	93
94	2.095	570.9	1 643	1.879	94
95	1.977	389.0	1 072	1.757	95
96	1.868	258.5	683	1.645	96
97	1.767	167.3	424	1.541	97
98	1.674	105.5	257	1.444	98
99	1.587	64.7	152	1.355	99
100		38.6	87	1.271	100
101		22.4	48	1.190	101
102		12.6	26	1.113	102
103		6.9	13	1.037	103
104		3.6	6	.961	104



TABLE 4 (continued)

JOINT LIFE ANNUITIES (MALES and FEMALES)

Ultimate:  $a_{xy}$ : 4%

Age of female	Age of male										
	60	62	64	66	68	70	72	74	76	78	80
60	9-852	9-380	8-875	8-343	7-790	7-223	6-651	6-080	5-519	4-976	4-458
62	9-547	9-111	8-641	8-141	7-619	7-080	6-531	5-982	5-440	4-912	4-406
64	9-203	8-804	8-371	7-907	7-418	6-910	6-389	5-865	5-344	4-834	4-344
66	8-818	8-459	8-064	7-639	7-186	6-712	6-223	5-726	5-229	4-741	4-269
68	8-396	8-076	7-722	7-336	6-922	6-484	6-029	5-563	5-095	4-631	4-179
70	7-938	7-657	7-343	6-998	6-625	6-226	5-808	5-376	4-938	4-501	4-073
72	7-451	7-208	6-933	6-629	6-296	5-937	5-558	5-162	4-758	4-351	3-949
74	6-940	6-732	6-496	6-231	5-938	5-621	5-281	4-923	4-554	4-179	3-806
76	6-413	6-238	6-037	5-810	5-556	5-279	4-978	4-660	4-327	3-987	3-645
78	5-878	5-732	5-564	5-372	5-156	4-916	4-655	4-375	4-080	3-774	3-465
80	5-345	5-225	5-085	4-925	4-743	4-540	4-315	4-073	3-814	3-544	3-267
82	4-821	4-724	4-609	4-477	4-326	4-156	3-966	3-759	3-535	3-300	3-056
84	4-316	4-237	4-145	4-037	3-913	3-772	3-614	3-439	3-249	3-046	2-834
86	3-836	3-774	3-700	3-613	3-512	3-396	3-266	3-120	2-960	2-788	2-606
88	3-388	3-339	3-280	3-210	3-129	3-035	2-928	2-808	2-675	2-530	2-376
90	2-977	2-938	2-891	2-836	2-771	2-695	2-608	2-510	2-400	2-280	2-150
92	2-604	2-574	2-537	2-493	2-441	2-381	2-310	2-231	2-141	2-041	1-933
94	2-272	2-248	2-219	2-184	2-143	2-094	2-038	1-973	1-900	1-818	1-728
96	1-980	1-961	1-938	1-910	1-877	1-839	1-793	1-741	1-681	1-614	1-539
98	1-725	1-710	1-692	1-670	1-644	1-613	1-576	1-533	1-485	1-430	1-368
100	1-504	1-492	1-477	1-460	1-439	1-414	1-384	1-350	1-310	1-265	1-214

Age of female	Age of male										
	80	82	84	86	88	90	92	94	96	98	100
60	4-458	3-969	3-515	3-099	2-723	2-387	2-090	1-831	1-606	1-413	1-246
62	4-406	3-928	3-483	3-074	2-703	2-371	2-077	1-821	1-598	1-407	1-240
64	4-344	3-879	3-443	3-043	2-678	2-351	2-062	1-808	1-589	1-399	1-234
66	4-269	3-818	3-395	3-004	2-648	2-327	2-043	1-793	1-576	1-389	1-226
68	4-179	3-746	3-337	2-958	2-611	2-298	2-019	1-774	1-561	1-377	1-216
70	4-073	3-660	3-268	2-903	2-567	2-263	1-991	1-752	1-543	1-362	1-203
72	3-949	3-559	3-186	2-837	2-514	2-220	1-957	1-724	1-520	1-343	1-189
74	3-806	3-441	3-090	2-759	2-451	2-169	1-916	1-691	1-493	1-321	1-170
76	3-645	3-307	2-980	2-669	2-377	2-110	1-868	1-652	1-461	1-295	1-149
78	3-465	3-156	2-854	2-565	2-293	2-041	1-811	1-605	1-423	1-263	1-123
80	3-267	2-989	2-714	2-449	2-197	1-962	1-746	1-552	1-379	1-227	1-092
82	3-056	2-808	2-561	2-320	2-090	1-873	1-673	1-491	1-328	1-185	1-057
84	2-834	2-616	2-397	2-181	1-973	1-775	1-591	1-423	1-271	1-137	1-017
86	2-606	2-417	2-225	2-034	1-847	1-669	1-502	1-348	1-208	1-084	0-972
88	2-376	2-214	2-048	1-881	1-716	1-557	1-407	1-267	1-140	1-025	0-922
90	2-150	2-013	1-870	1-726	1-582	1-442	1-308	1-183	1-068	0-964	0-869
92	1-933	1-817	1-696	1-572	1-448	1-325	1-207	1-096	0-993	0-899	0-814
94	1-728	1-632	1-529	1-424	1-317	1-210	1-107	1-009	0-917	0-833	0-757
96	1-539	1-459	1-373	1-283	1-192	1-100	1-010	0-924	0-843	0-768	0-700
98	1-368	1-301	1-229	1-153	1-075	0-996	0-918	0-843	0-771	0-705	0-644
100	1-214	1-158	1-098	1-034	0-967	0-899	0-832	0-766	0-704	0-646	0-591

TABLE 5

PENSION FUND TABLES

Service table and salary scale

Age $x$	$l_x$	$w_x$	$d_x$	$i_x$	$r_x$	$s_x$	Age $x$
18	100 000	10 000	80			1-00	18
19	89 920	8 992	72			1-10	19
20	80 856	8 085	65			1-21	20
21	72 706	6 907	58			1-33	21
22	65 741	5 917	59			1-46	22
23	59 765	5 080	54			1-59	23
24	54 631	4 371	49			1-73	24
25	50 211	3 766	50			1-87	25
26	46 395	3 248	46			2-02	26
27	43 101	2 802	47			2-16	27
28	40 252	2 415	44			2-29	28
29	37 793	2 079	45			2-42	29
30	35 669	1 784	46			2-55	30
31	33 839	1 557	47	3		2-67	31
32	32 232	1 354	49	3		2-78	32
33	30 826	1 171	49	3		2-88	33
34	29 603	1 007	50	6		2-98	34
35	28 540	856	51	6		3-08	35
36	27 627	746	52	6		3-18	36
37	26 823	644	54	8		3-28	37
38	26 117	548	55	8		3-38	38
39	25 506	459	56	8		3-48	39
40	24 983	375	57	10		3-58	40
41	24 541	295	61	10		3-68	41
42	24 175	218	65	12		3-78	42
43	23 880	143	69	12		3-88	43
44	23 656	71	76	14		3-98	44
45	23 495		82	14		4-08	45
46	23 399		92	16		4-18	46
47	23 291		100	19		4-28	47
48	23 172		108	21		4-38	48
49	23 043		120	23		4-47	49
50	22 900		130	28		4-56	50
51	22 742		143	32		4-65	51
52	22 567		156	39		4-73	52
53	22 372		170	44		4-81	53
54	22 158		184	53		4-88	54
55	21 921		200	61		4-95	55
56	21 660		217	71		5-01	56
57	21 372		236	83		5-07	57
58	21 053		254	99		5-13	58
59	20 700		276	118		5-19	59
60	20 306		297	146	4 061	5-24	60
61	19 802		253	153	2 370	5-29	61
62	19 026		228	178	1 303	5-33	62
63	18 317		216	217	1 132	5-37	63
64	17 752		203	265	975	5-40	64
65	17 309				8 309		65



TABLE 5 (continued)

Contribution functions: 4% per annum interest

Age	$D_x$	$\bar{D}_x = \frac{1}{2}(D_x + D_{x+1})$	$\bar{N}_x = \sum \bar{D}_x$	$^s\bar{D}_x = s_x \bar{D}_x$	$^s\bar{N}_x = \sum ^s\bar{D}_x$	$^sD_x = s_x D_x$	Age
18	49 363	46 021	438 252	46 021	973 119	49 363	18
19	42 680	39 791	392 231	43 770	927 098	46 948	19
20	36 902	34 404	352 440	41 629	883 328	44 651	20
21	31 906	29 823	318 037	39 665	841 699	42 435	21
22	27 740	25 994	288 214	37 951	802 034	40 500	22
23	24 248	22 780	262 220	36 220	764 083	38 554	23
24	21 313	20 074	239 440	34 728	727 863	36 871	24
25	18 835	17 785	219 366	33 258	693 135	35 222	25
26	16 734	15 841	201 581	31 999	659 877	33 803	26
27	14 948	14 186	185 740	30 642	627 878	32 288	27
28	13 423	12 771	171 555	29 246	597 236	30 739	28
29	12 118	11 558	158 784	27 970	567 990	29 326	29
30	10 997	10 515	147 226	26 813	540 020	28 043	30
31	10 032	9 610	136 711	25 659	513 207	26 785	31
32	9 188	8 819	127 102	24 517	487 548	25 542	32
33	8 449	8 126	118 283	23 403	463 031	24 334	33
34	7 802	7 518	110 157	22 404	439 628	23 249	34
35	7 232	6 982	102 640	21 505	417 224	22 276	35
36	6 732	6 508	95 658	20 695	395 719	21 407	36
37	6 284	6 084	89 150	19 956	375 024	20 613	37
38	5 884	5 704	83 066	19 280	355 068	19 887	38
39	5 525	5 364	77 362	18 667	335 788	19 227	39
40	5 204	5 059	71 997	18 111	317 121	18 629	40
41	4 915	4 785	66 938	17 609	299 010	18 087	41
42	4 656	4 539	62 153	17 157	281 401	17 598	42
43	4 422	4 317	57 614	16 750	264 244	17 157	43
44	4 212	4 117	53 297	16 386	247 494	16 763	44
45	4 022	3 937	49 180	16 063	231 108	16 411	45
46	3 852	3 769	45 243	15 754	215 045	16 100	46
47	3 687	3 607	41 474	15 438	199 291	15 778	47
48	3 527	3 449	37 867	15 107	183 853	15 447	48
49	3 372	3 297	34 418	14 738	168 746	15 073	49
50	3 222	3 150	31 121	14 364	154 008	14 693	50
51	3 077	3 006	27 971	13 978	139 644	14 308	51
52	2 936	2 867	24 965	13 561	125 666	13 886	52
53	2 799	2 732	22 098	13 141	112 105	13 461	53
54	2 665	2 600	19 366	12 688	98 964	13 006	54
55	2 535	2 472	16 765	12 236	86 276	12 549	55
56	2 409	2 347	14 294	11 758	74 040	12 068	56
57	2 285	2 225	11 947	11 281	62 282	11 586	57
58	2 165	2 106	9 722	10 804	51 001	11 105	58
59	2 046	1 988	7 616	10 318	40 197	10 621	59
60	1 930	1 887	5 628	8 840	29 879	10 115	60
61	1 844	1 795	3 940	6 851	21 039	7 641	61
62	1 745	1 695	2 646	5 602	14 188	6 102	62
63	1 656	1 606	1 595	4 693	8 586	5 136	63
64	1 572	1 522	721	3 893	3 893	4 279	64
65	649						65

TABLE 5 (continued)

4% per annum interest

FUNCTIONS FOR PAYMENTS ON DEATH WITH INTEREST ACCUMULATED AT 3% PER ANNUM

Age $x$	$^jC_x^d = v^{x+\frac{1}{2}}(1+j)^{x+\frac{1}{2}}d_x$	$^jM_x^d = \sum ^jC_x^d$	$^j\bar{R}_x^d = \frac{jM_x^d - \frac{1}{2}^jC_x^d}{(1+j)^{x+\frac{1}{2}}}$	$^s\bar{R}_x^d = \frac{s_x(^jM_x^d - \frac{1}{2}^jC_x^d)}{(1+j)^{x+\frac{1}{2}}}$	Age $x$
20	53	3 110	31 397	87 726	20
25	39	2 881	23 699	76 546	25
30	35	2 701	17 504	63 288	30
35	36	2 525	12 495	49 451	35
40	39	2 338	8 474	36 298	40
45	53	2 120	5 288	24 285	45
50	80	1 803	2 859	13 927	50
55	117	1 332	1 177	5 999	55
56	125	1 215	930	4 776	56
57	135	1 090	713	3 690	57
58	145	955	526	2 743	58
59	155	810	369	1 940	59
60	165	655	243	1 285	60
61	140	490	147	783	61
62	124	350	79	423	62
63	117	226	34	181	63
64	109	109	8	43	64

All summations are based on accumulating from age 64 although only quinquennial values are shown up to age 55.

FUNCTIONS FOR PAYMENTS ON WITHDRAWAL WITH INTEREST ACCUMULATED AT 3% PER ANNUM

Age $x$	$^jC_x^w = v^{x+\frac{1}{2}}(1+j)^{x+\frac{1}{2}}w_x$	$^jM_x^w = \sum ^jC_x^w$	$^j\bar{R}_x^w = \frac{jM_x^w - \frac{1}{2}^jC_x^w}{(1+j)^{x+\frac{1}{2}}}$	$^s\bar{R}_x^w = \frac{s_x(^jM_x^w - \frac{1}{2}^jC_x^w)}{(1+j)^{x+\frac{1}{2}}}$	Age $x$
20	6 633	43 550	119 400	207 911	20
25	2 944	19 045	42 211	98 740	25
30	1 328	8 041	13 391	38 289	30
35	608	3 007	3 281	10 741	35
36	524	2 399	2 334	7 826	36
37	448	1 875	1 608	5 516	37
38	378	1 427	1 063	3 729	38
39	313	1 049	666	2 389	39
40	253	735	389	1 424	40
41	197	482	205	766	41
42	144	285	93	352	42
43	94	140	32	124	43
44	46	46	6	24	44

All summations are based on annual values from age 44, the highest age at which withdrawals are assumed to take place although only quinquennial values are shown up to age 35.



TABLE 5 (continued)

ILL-HEALTH RETIREMENT FUNCTIONS: 4% per annum interest

Age $x$	$C_x^i = v^{x+\frac{1}{2}}i_x$	$M_x^i = \Sigma C_x^i$	$\bar{R}_x^i = \Sigma(M_x^i - \frac{1}{2}C_x^i)$	$C_x^{ia} = v^{x+\frac{1}{2}}i_x\bar{a}_{x+\frac{1}{2}}^i$	$M_x^{ia} = \Sigma C_x^{ia}$	$\bar{R}_x^{ia} = \Sigma(M_x^{ia} - \frac{1}{2}C_x^{ia})$	Age $x$
20		189	6 841		1 821	64 923	20
25		189	5 897		1 821	55 820	25
30		189	4 952		1 821	46 718	30
35	1	185	4 016	15	1 774	37 699	35
40	2	177	3 111	22	1 688	29 034	40
45	2	166	2 254	25	1 572	20 873	45
50	4	151	1 459	39	1 421	13 367	50
55	7	127	757	69	1 170	6 831	55
56	8	120	634	77	1 100	5 696	56
57	9	112	518	85	1 023	4 634	57
58	10	103	410	96	938	3 653	58
59	11	93	312	109	842	2 763	59
60	14	82	224	127	733	1 975	60
61	14	68	149	126	606	1 306	61
62	15	54	88	139	480	763	62
63	18	39	41	159	341	353	63
64	21	21	11	182	182	91	64

Age $x$	${}^s\bar{M}_x^{ia} = {}^sM_x^{ia} - \frac{1}{2}C_x^{ia}$	${}^s\bar{R}_x^{ia} = \Sigma {}^s\bar{M}_x^{ia}$	${}^zC_x^{ia} = {}^zM_x^{ia} - \frac{1}{2}C_x^{ia}$	${}^zM_x^{ia} = \Sigma {}^zC_x^{ia}$	${}^z\bar{R}_x^{ia} = \Sigma ({}^zM_x^{ia} - \frac{1}{2}C_x^{ia})$	Age $x$
20	2 203	215 088		8 636	318 302	20
25	3 404	201 761		8 636	275 122	25
30	4 642	182 173		8 636	231 941	30
35	5 441	157 184	45	8 513	188 977	35
40	6 004	128 781	75	8 243	147 045	40
45	6 361	97 957	98	7 819	106 825	45
50	6 391	65 879	173	7 197	69 159	50
55	5 618	35 026	335	6 036	35 759	55
56	5 320	29 408	377	5 700	29 891	56
57	4 972	24 089	424	5 323	24 379	57
58	4 566	19 117	484	4 899	19 268	58
59	4 088	14 550	554	4 415	14 611	59
60	3 509	10 462	657	3 861	10 472	60
61	2 871	6 953	658	3 204	6 940	61
62	2 187	4 082	729	2 546	4 064	62
63	1 404	1 895	844	1 817	1 882	63
64	491	491	974	974	487	64

All summations are based on annual values from age 64 although only quinquennial values are shown up to age 55.

$$z_x = \frac{1}{5}(s_{x-3} + s_{x-2} + s_{x-1})$$

TABLE 5 (continued)

AGE RETIREMENT FUNCTIONS: 4% per annum interest

Age $x$	$C_x^r = v^{x+\frac{1}{2}}r_x$ ( $v^x r_x$ at 65)	$M_x^r = \Sigma C_x^r$	$\bar{R}_x^r = \Sigma(M_x^r - \frac{1}{2}C_x^r)$	$C_x^{ra} = v^{x+\frac{1}{2}}r_x\bar{a}_{x+\frac{1}{2}}^r$ ( $v^x r_x \bar{a}_x^r$ at 65)	$M_x^{ra} = \Sigma C_x^{ra}$	$\bar{R}_x^{ra} = \Sigma(M_x^{ra} - \frac{1}{2}C_x^{ra})$	Age $x$
20		1 524	65 669		16 742	719 370	20
25		1 524	58 049		16 742	635 660	25
30		1 524	50 430		16 742	551 950	30
35		1 524	42 810		16 742	468 240	35
40		1 524	35 191		16 742	384 530	40
45		1 524	27 571		16 742	300 820	45
50		1 524	19 951		16 742	217 110	50
55		1 524	12 332		16 742	133 399	55
56		1 524	10 808		16 742	116 657	56
57		1 524	9 284		16 742	99 915	57
58		1 524	7 760		16 742	83 173	58
59		1 524	6 236		16 742	66 431	59
60	379	1 524	4 712	4 520	16 742	49 689	60
61	212	1 145	3 378	2 459	12 222	35 207	61
62	112	933	2 339	1 258	9 764	24 214	62
63	94	821	1 462	1 016	8 505	15 079	63
64	78	727	688	814	7 489	7 082	64
65	649	649		6 675	6 675		65

Age $x$	${}^s\bar{M}_x^{ra} = {}^sM_x^{ra} - \frac{1}{2}C_x^{ra}$	${}^s\bar{R}_x^{ra} = \Sigma {}^s\bar{M}_x^{ra}$	${}^zC_x^{ra} = {}^zM_x^{ra} - \frac{1}{2}C_x^{ra}$ ( $z_x C_x^{ra}$ at 65)	${}^zM_x^{ra} = \Sigma {}^zC_x^{ra}$	${}^z\bar{R}_x^{ra} = \Sigma ({}^zM_x^{ra} - \frac{1}{2}C_x^{ra})$	Age $x$
20	20 258	2 567 780		88 345	3 798 939	20
25	31 308	2 445 228		88 345	3 357 212	25
30	42 692	2 265 084		88 345	2 915 486	30
35	51 565	2 033 040		88 345	2 473 760	35
40	59 936	1 758 471		88 345	2 032 033	40
45	68 307	1 442 047		88 345	1 590 307	45
50	76 344	1 083 936		88 345	1 148 580	50
55	82 873	688 322		88 345	706 854	55
56	83 877	605 450		88 345	618 509	56
57	84 882	521 572		88 345	530 163	57
58	85 886	436 690		88 345	441 818	58
59	86 891	350 804		88 345	353 473	59
60	75 887	263 913	23 321	88 345	265 127	60
61	58 152	188 026	12 811	65 024	188 443	61
62	48 686	129 874	6 618	52 213	129 824	62
63	42 944	81 187	5 397	45 596	80 920	63
64	38 243	38 243	4 352	40 199	38 022	64
65			35 846	35 846		65

All summations are based on annual values (from age 64 or age 65 as appropriate) although only quinquennial values are shown up to age 55.

$$z_x = \frac{1}{5}(s_{x-3} + s_{x-2} + s_{x-1})$$



TABLE 6  
SICKNESS TABLE

MANCHESTER UNITY EXPERIENCE 1893-7  
OCCUPATION GROUP AHJ  
Rates of sickness (in weeks per annum)

Age	First 3 months	Second 3 months	Second 6 months	Second 12 months	After 2 years	All periods	Age
16	.816	.048	.017	.000	.000	.881	16
17	.796	.050	.020	.000	.000	.866	17
18	.766	.054	.024	.004	.000	.848	18
19	.732	.059	.029	.009	.000	.829	19
20	.698	.065	.035	.013	.004	.815	20
21	.670	.071	.041	.019	.009	.810	21
22	.651	.075	.046	.026	.016	.814	22
23	.640	.078	.050	.031	.024	.823	23
24	.635	.080	.053	.034	.032	.834	24
25	.633	.082	.056	.035	.039	.845	25
26	.633	.084	.058	.036	.045	.856	26
27	.635	.085	.060	.038	.049	.867	27
28	.638	.086	.062	.041	.054	.881	28
29	.643	.088	.064	.044	.059	.898	29
30	.649	.090	.066	.048	.065	.918	30
31	.656	.093	.068	.052	.072	.941	31
32	.663	.096	.070	.055	.082	.966	32
33	.670	.100	.073	.055	.093	.991	33
34	.677	.105	.077	.056	.105	1.020	34
35	.685	.110	.081	.058	.118	1.052	35
36	.696	.115	.086	.062	.132	1.091	36
37	.709	.121	.091	.068	.147	1.136	37
38	.726	.128	.096	.074	.166	1.190	38
39	.744	.136	.102	.080	.187	1.249	39
40	.764	.143	.109	.087	.210	1.313	40
41	.784	.151	.116	.092	.235	1.378	41
42	.803	.159	.124	.098	.259	1.443	42
43	.821	.166	.133	.105	.283	1.508	43
44	.839	.174	.141	.112	.308	1.574	44
45	.858	.182	.148	.120	.335	1.643	45
46	.879	.190	.156	.129	.363	1.717	46
47	.904	.201	.165	.138	.396	1.804	47
48	.932	.215	.176	.148	.436	1.907	48
49	.962	.232	.189	.161	.486	2.030	49
50	.994	.249	.206	.177	.551	2.177	50
51	1.027	.268	.225	.196	.631	2.347	51
52	1.061	.288	.247	.219	.724	2.539	52
53	1.096	.309	.272	.244	.829	2.750	53
54	1.134	.330	.300	.275	.939	2.978	54
55	1.175	.353	.332	.310	1.051	3.221	55
56	1.218	.378	.368	.352	1.165	3.481	56
57	1.262	.405	.407	.400	1.285	3.759	57
58	1.308	.435	.449	.455	1.418	4.065	58
59	1.356	.471	.495	.516	1.575	4.413	59
60	1.409	.510	.547	.585	1.770	4.821	60

TABLE 6 (continued)

MANCHESTER UNITY EXPERIENCE 1893-7  
OCCUPATION GROUP AHJ  
Rates of sickness (in weeks per annum)

Age	First 3 months	Second 3 months	Second 6 months	Second 12 months	After 2 years	All periods	Age
61	1.466	.555	.607	.665	2.017	5.310	61
62	1.526	.602	.674	.759	2.332	5.893	62
63	1.587	.653	.747	.865	2.718	6.570	63
64	1.650	.707	.824	.980	3.174	7.335	64
65	1.715	.761	.906	1.106	3.695	8.183	65
66	1.779	.820	.997	1.244	4.277	9.117	66
67	1.841	.882	1.100	1.406	4.924	10.153	67
68	1.893	.945	1.213	1.596	5.655	11.302	68
69	1.929	1.008	1.332	1.803	6.487	12.559	69
70	1.948	1.064	1.449	2.017	7.435	13.913	70
71	1.952	1.110	1.554	2.224	8.506	15.346	71
72	1.947	1.147	1.646	2.427	9.679	16.846	72
73	1.940	1.178	1.725	2.592	10.974	18.409	73
74	1.932	1.205	1.793	2.756	12.350	20.036	74
75	1.921	1.228	1.856	2.906	13.802	21.713	75
76	1.901	1.247	1.913	3.031	15.305	23.397	76
77	1.871	1.260	1.956	3.118	16.856	25.061	77
78	1.824	1.266	1.990	3.180	18.428	26.688	78
79	1.764	1.259	1.973	3.216	20.053	28.265	79
80	1.696	1.238	1.932	3.219	21.692	29.777	80
81	1.625	1.206	1.864	3.193	23.313	31.201	81
82	1.559	1.161	1.784	3.133	24.819	32.456	82
83	1.497	1.107	1.707	3.042	26.134	33.487	83
84	1.436	1.055	1.648	2.926	27.246	34.311	84
85	1.365	1.006	1.607	2.811	28.183	34.972	85
86	1.278	.965	1.580	2.701	29.027	35.551	86
87	1.177	.935	1.560	2.601	29.846	36.119	87
88	1.078	.910	1.544	2.522	30.645	36.699	88
89	1.078	.910	1.544	2.522	31.177	37.231	89
90	1.078	.910	1.544	2.522	31.610	37.664	90
91	1.078	.910	1.544	2.522	31.891	37.945	91
92	1.078	.910	1.544	2.522	31.891	37.945	92
93	1.078	.910	1.544	2.522	31.891	37.945	93
94	1.078	.910	1.544	2.522	31.891	37.945	94
95	1.078	.910	1.544	2.522	31.891	37.945	95
96	1.078	.910	1.544	2.522	31.891	37.945	96
97	1.078	.910	1.544	2.522	31.891	37.945	97
98	1.078	.910	1.544	2.522	31.891	37.945	98
99	1.078	.910	1.544	2.522	31.891	37.945	99
100	1.078	.910	1.544	2.522	31.891	37.945	100



TABLE 6 (continued)

MORTALITY RATES OF ENGLISH LIFE TABLE No. 12—Males  
SICKNESS RATES OF MANCHESTER UNITY EXPERIENCE 1893-7

OCCUPATION GROUP AHJ

Commutation columns  $K$  for sickness benefit values: 4% interest

Age	$K_x^{13}$	$K_x^{13/13}$	$K_x^{26/26}$	$K_x^{52/52}$	$K_x^{104/all}$	Age
16	934 156	194 925	186 421	198 447	738 483	16
17	892 859	192 496	185 561	198 447	738 483	17
18	854 158	190 065	184 588	198 447	738 483	18
19	818 386	187 543	183 467	198 260	738 483	19
20	785 554	184 896	182 167	197 857	738 483	20
21	755 486	182 096	180 659	197 297	738 311	21
22	727 768	179 159	178 963	196 511	737 939	22
23	701 901	176 179	177 135	195 477	737 303	23
24	677 477	173 202	175 227	194 294	736 387	24
25	654 200	170 270	173 284	193 048	735 214	25
26	631 912	167 383	171 312	191 816	733 841	26
27	610 502	164 541	169 351	190 598	732 319	27
28	589 870	161 780	167 401	189 363	730 727	28
29	569 959	159 096	165 466	188 084	729 041	29
30	550 684	156 458	163 548	186 765	727 273	30
31	531 998	153 867	161 647	185 383	725 401	31
32	513 859	151 295	159 767	183 945	723 410	32
33	496 253	148 746	157 908	182 485	721 233	33
34	479 168	146 196	156 047	181 082	718 861	34
35	462 592	143 625	154 161	179 711	716 291	35
36	446 490	141 039	152 257	178 347	713 517	36
37	430 783	138 444	150 317	176 948	710 538	37
38	415 425	135 823	148 345	175 475	707 354	38
39	400 332	133 162	146 350	173 937	703 903	39
40	385 490	130 449	144 315	172 341	700 172	40
41	370 869	127 712	142 229	170 676	696 153	41
42	356 477	124 940	140 099	168 987	691 839	42
43	342 342	122 141	137 917	167 262	687 280	43
44	328 488	119 340	135 672	165 490	682 505	44
45	314 921	116 527	133 392	163 679	677 524	45
46	301 631	113 707	131 100	161 820	672 335	46
47	288 594	110 889	128 786	159 907	666 951	47
48	275 764	108 037	126 444	157 949	661 331	48
49	263 113	105 118	124 055	155 940	655 413	49
50	250 633	102 109	121 604	153 851	649 108	50
51	238 319	99 023.9	119 052	151 658	642 282	51
52	226 180	95 856.3	116 392	149 342	634 824	52
53	214 228	92 611.9	113 610	146 875	626 668	53
54	202 473	89 297.8	110 692	144 258	617 777	54
55	190 909	85 932.6	107 633	141 453	608 201	55
56	179 533	82 514.8	104 419	138 452	598 025	56
57	168 353	79 045.3	101 041	135 221	587 332	57
58	157 391	75 527.4	97 505.6	131 746	576 170	58
59	146 659	71 958.2	93 821.5	128 013	564 536	59
60	136 170	68 315.0	89 992.7	124 022	552 353	60

TABLE 6 (continued)

MORTALITY RATES OF ENGLISH LIFE TABLE No. 12—Males  
SICKNESS RATES OF MANCHESTER UNITY EXPERIENCE 1893-7

OCCUPATION GROUP AHJ

Commutation columns  $K$  for sickness benefit values: 4% interest

Age	$K_x^{13}$	$K_x^{13/13}$	$K_x^{26/26}$	$K_x^{52/52}$	$K_x^{104/all}$	Age
61	125 918	64 604.3	86 012.7	119 765	539 475	61
62	115 908	60 814.7	81 868.1	115 225	525 702	62
63	106 155	56 967.0	77 560.2	110 374	510 797	63
64	96 685.4	53 070.6	73 102.9	105 212	494 579	64
65	87 520.4	49 143.5	68 526.0	99 768.8	476 949	65
66	78 680.3	45 220.9	63 855.9	94 067.8	457 903	66
67	70 198.6	41 311.4	59 102.6	88 136.8	437 512	67
68	62 109.0	37 435.8	54 269.0	81 958.8	415 875	68
69	54 471.9	33 623.2	49 375.3	75 519.8	393 060	69
70	47 356.1	29 904.9	44 461.7	68 868.1	369 131	70
71	40 815.2	26 332.2	39 596.3	62 096.1	344 166	71
72	34 878.1	22 956.1	34 869.8	55 331.8	318 294	72
73	29 542.4	19 812.8	30 359.0	48 680.7	291 770	73
74	24 780.1	16 921.0	26 124.4	42 317.8	264 830	74
75	20 558.6	14 288.1	22 206.7	36 296.0	237 846	75
76	16 848.7	11 916.5	18 622.3	30 683.7	211 190	76
77	13 628.4	9 804.08	15 381.6	25 549.1	185 263	77
78	10 871.5	7 947.48	12 499.5	20 954.8	160 426	78
79	8 554.97	6 339.66	9 972.95	16 916.2	137 023	79
80	6 643.24	4 975.23	7 833.95	13 430.8	115 290	80
81	5 091.68	3 842.65	6 066.48	10 486.0	95 445.5	81
82	3 851.37	2 922.15	4 643.75	8 048.87	77 651.5	82
83	2 871.03	2 192.09	3 521.92	6 078.75	62 044.7	83
84	2 105.89	1 626.29	2 649.45	4 523.95	48 687.3	84
85	1 517.86	1 194.27	1 974.61	3 325.78	37 530.2	85
86	1 076.82	869.22	1 455.37	2 417.51	28 424.0	86
87	756.18	627.11	1 058.97	1 739.86	21 141.4	87
88	530.71	448.01	760.13	1 241.61	15 424.2	88
89	375.78	317.22	538.22	879.14	11 019.7	89
90	261.61	220.84	374.70	612.05	7 717.90	90
91	179.03	151.13	256.43	418.85	5 296.46	91
92	120.42	101.65	172.48	281.72	3 562.44	92
93	79.60	67.20	114.01	186.23	2 354.93	93
94	51.72	43.66	74.08	121.00	1 530.03	94
95	33.03	27.88	47.31	77.28	977.20	95
96	20.74	17.51	29.71	48.53	613.65	96
97	12.81	10.81	18.35	29.97	379.00	97
98	7.78	6.57	11.15	18.21	230.28	98
99	4.65	3.93	6.67	10.89	137.67	99
100	2.74	2.31	3.92	6.40	80.98	100