

Tabel 1

## COMMISSIONERS 1941 STANDARD ORDINARY MORTALITY TABLE

$x$	$l_x$	$d_x$	$1000q_x$	$i_x$
0	1 023 102	23 102	22.58	62.33
1	1 000 000	5 770	5.77	62.76
2	994 230	4 116	4.14	62.12
3	990 114	3 347	3.38	61.37
4	986 767	2 950	2.99	60.58
5	983 817	2 715	2.76	59.76
6	981 102	2 561	2.61	58.92
7	978 541	2 417	2.47	58.08
8	976 124	2 255	2.31	57.22
9	973 809	2 065	2.12	56.35
10	971 804	1 914	1.97	55.47
11	969 890	1 852	1.91	54.58
12	968 038	1 859	1.92	53.68
13	966 179	1 913	1.98	52.78
14	964 266	1 990	2.07	51.89
15	962 270	2 080	2.15	50.99
16	960 201	2 103	2.19	50.10
17	958 008	2 158	2.25	49.21
18	955 942	2 199	2.30	48.32
19	953 743	2 260	2.37	47.43
20	951 483	2 312	2.43	46.54
21	949 171	2 382	2.51	45.66
22	946 789	2 452	2.59	44.77
23	944 337	2 531	2.68	43.88
24	941 806	2 609	2.77	43.00
25	939 197	2 705	2.88	42.12
26	936 492	2 800	2.99	41.24
27	933 692	2 904	3.11	40.36
28	930 788	3 025	3.25	39.49
29	927 763	3 164	3.40	38.61
30	924 609	3 292	3.56	37.74
31	921 317	3 437	3.73	36.88
32	917 880	3 598	3.92	36.01
33	914 282	3 767	4.12	35.15
34	910 515	3 961	4.35	34.29

Sumber : Materi Pokok Asuransi I.

R.K Sembiring, Ph. D., 1986

$x$	$l_x$	$d_x$	$1000/q_x$	$e_x$
35	906 554	4 161	4.59	33.44
36	902 393	4 386	4.86	32.59
37	898 007	4 625	5.15	31.75
38	893 382	4 878	5.46	30.91
39	888 504	5 162	5.81	30.08
40	883 342	5 459	6.18	29.25
41	877 883	5 785	6.59	28.43
42	872 098	6 131	7.03	27.62
43	865 967	6 503	7.51	26.81
44	859 404	6 910	8.04	26.01
45	852 554	7 340	8.61	25.21
46	846 214	7 801	9.23	24.43
47	837 413	8 299	9.91	23.65
48	829 114	8 822	10.64	22.88
49	820 292	9 392	11.45	22.12
50	810 000	9 990	12.32	21.37
51	800 910	10 028	13.27	20.64
52	790 282	11 301	14.30	19.91
53	778 981	12 020	15.43	19.19
54	766 901	12 770	16.65	18.48
55	754 191	13 500	17.98	17.78
56	740 631	14 390	19.43	17.10
57	726 241	15 251	21.00	16.43
58	710 990	16 147	22.71	15.77
59	694 843	17 072	24.57	15.13
60	677 771	18 022	26.59	14.50
61	659 749	18 988	28.78	13.88
62	640 761	19 979	31.18	13.27
63	620 782	20 958	33.76	12.69
64	599 824	21 942	36.58	12.11
65	577 882	22 907	39.64	11.55
66	554 975	23 842	42.96	11.01
67	531 133	24 730	46.56	10.48
68	506 403	25 553	50.46	9.97
69	480 850	26 302	54.70	9.47

$x$	$t_x$	$d_x$	$1000q_x$	$z_x$
70	451 548	26 955	59.30	8.99
71	427 593	27 481	64.27	8.52
72	400 112	27 872	69.66	8.08
73	372 240	28 104	75.50	7.64
74	344 136	28 154	81.81	7.23
75	315 982	28 009	88.64	6.82
76	287 973	27 651	96.02	6.44
77	260 322	27 071	103.99	6.07
78	233 251	26 262	112.59	5.72
79	206 989	25 224	121.86	5.38
80	181 765	23 966	131.85	5.06
81	157 799	22 502	142.60	4.75
82	135 297	20 857	154.10	4.46
83	114 440	19 062	166.57	4.18
84	95 378	17 157	179.88	3.91
85	78 221	15 185	194.13	3.66
86	63 030	13 198	209.37	3.42
87	49 838	11 245	225.63	3.19
88	38 593	9 378	243.00	2.98
89	29 215	7 638	261.44	2.77
90	21 577	6 003	280.99	2.58
91	15 514	4 681	301.73	2.39
92	10 833	3 506	323.64	2.21
93	7 327	2 540	346.66	2.03
94	4 787	1 776	371.00	1.84
95	3 011	1 193	396.21	1.63
96	1 818	813	447.19	1.37
97	1 005	551	548.26	1.08
98	454	329	724.67	0.78
99	125	125	1000.00	0.50

Nilai Simbol Kumutasi, CSO  $\frac{1}{2}$ 

$x$	$D_x$	$N_x$	$S_x$	$C_x$	$M_x$	$E_x$
0	1 028 102.00	31 374 229.80	784 658 956.06	22 638.636 6	267 870.883 9	12 238 206.496 7
1	976 609.76	30 251 127.80	753 284 726.86	5 491.989 1	238 238.347 3	11 978 329.612 8
2	946 322.43	29 375 618.04	722 933 598.08	3 822.116 2	229 846.378 2	11 742 991.266 6
3	919 419.28	28 429 196.61	693 568 080.01	2 032.216 8	226 024.268 0	11 513 144.887 2
4	893 962.20	27 509 776.33	665 128 884.40	2 607.370 2	222 992.046 2	11 287 120.624 3
5	869 550.88	26 618 814.13	637 619 108.07	2 341.136 0	220 384.676 0	11 064 128.678 1
6	846 001.18	26 746 263.26	611 003 293.94	2 154.480 3	218 043.640 0	10 843 743.902 1
7	823 212.68	24 900 262.07	585 257 030.89	1 983.744 5	216 889.059 7	10 626 700.362 1
8	801 150.42	24 077 049.84	560 356 768.62	1 806.642 5	213 906.315 2	10 409 811.802 4
9	779 804.63	23 276 809.12	536 279 719.08	1 613.174 7	212 099.672 7	10 196 905.987 2
10	759 171.73	22 496 094.59	513 003 819.96	1 458.745 1	210 486.398 0	9 983 806.314 6
11	739 196.60	21 736 922.66	490 607 726.37	1 377.066 6	209 027.752 9	9 773 319.816 6
12	719 790.86	20 997 726.26	468 770 802.61	1 348.656 5	207 650.687 6	9 564 292.063 6
13	700 886.94	20 277 936.90	447 778 076.26	1 353.882 1	206 302.180 9	9 356 641.376 2
14	682 437.23	19 577 049.96	427 495 140.36	1 378.169 3	204 948.248 8	9 150 339.246 3
15	664 414.29	18 894 612.68	407 918 090.39	1 393.730 0	203 670.079 6	8 945 390.996 6
16	646 816.33	18 230 198.89	389 023 477.71	1 382.081 2	202 176.349 6	8 741 620.917 0
17	629 667.27	17 583 383.06	370 793 279.32	1 382.363 7	200 794.268 3	8 539 644.667 6
18	612 917.42	16 963 725.79	352 209 896.24	1 376.636 5	199 411.914 6	8 338 650.299 2
19	596 593.68	16 340 808.87	336 266 170.47	1 379.212 3	198 036.379 1	8 139 438.384 6
20	580 682.42	15 744 216.69	319 916 362.10	1 376.533 1	196 657.166 8	7 941 402.005 6
21	565 128.40	15 163 668.27	304 171 146.41	1 383.619 6	195 280.633 7	7 744 744.838 7
22	549 966.28	14 598 429.87	289 007 693.14	1 389.541 6	193 897.014 1	7 549 464.205 0
23	536 163.17	14 048 478.69	274 409 163.27	1 399.327 5	192 507.472 6	7 355 667.190 9
24	520 701.32	13 513 320.42	260 360 689.68	1 407.270 0	191 108.145 0	7 163 069.716 4
25	506 594.02	12 992 619.10	246 847 369.26	1 423.464 9	189 700.875 0	6 971 951.373 4
26	492 814.61	12 486 025.08	233 854 750.16	1 437.619 2	188 277.410 1	6 782 260.698 4
27	479 367.22	11 993 210.47	221 368 726.08	1 454.549 1	186 839.890 9	6 593 973.286 3
28	466 211.08	11 518 853.26	209 876 614.61	1 478.200 3	185 386.341 6	6 407 133.397 4
29	452 361.63	11 047 642.22	197 861 661.36	1 503.646 4	183 907.141 6	6 221 748.066 6
30	440 800.68	10 594 280.39	186 814 019.14	1 531.158 0	182 403.495 1	6 037 840.914 1
31	428 518.18	10 163 479.81	176 219 738.75	1 560.609 4	180 872.337 1	5 855 437.419 0
32	416 606.91	9 724 961.63	166 066 258.94	1 592.846 8	179 312.727 7	5 674 566.081 9
33	404 765.37	9 308 454.72	156 341 297.31	1 628.987 4	177 719.882 4	5 495 262.354 2
34	393 266.29	8 903 699.36	147 032 842.69	1 669.060 8	176 092.895 0	5 317 632.471 8
35	381 995.33	8 510 443.06	138 129 143.24	1 710.561 0	174 423.844 2	5 141 439.576 8
36	370 968.10	8 128 447.43	129 618 700.18	1 759.080 1	172 713.283 2	4 967 016.732 6
37	360 161.02	7 767 479.33	121 460 262.76	1 809.692 8	170 964.203 1	4 794 302.449 4
38	349 566.90	7 397 818.31	113 732 773.42	1 862.134 5	169 144.510 3	4 623 348.248 3
39	339 178.75	7 047 751.41	106 236 466.11	1 922.486 9	167 282.376 6	4 464 203.726 0
40	328 988.61	6 708 672.66	99 287 703.70	1 983.611 0	165 369.688 9	4 286 921.860 2
41	318 976.11	6 379 589.06	92 679 181.04	2 050.694 7	163 378.377 9	4 121 661.471 3
42	309 146.61	6 060 612.94	86 199 541.99	2 120.338 1	161 326.683 2	3 958 185.094 4
43	299 486.04	5 761 467.43	80 158 929.06	2 194.136 7	159 206.246 1	3 796 869.410 2
44	289 986.39	5 481 983.39	74 387 461.62	2 274.596 1	157 011.208 4	3 637 664.066 1
45	280 638.95	5 161 996.00	68 935 479.23	2 357.209 9	154 736.618 3	3 480 642.866 7
46	271 436.89	4 861 367.06	63 773 483.23	2 444.154 2	152 379.408 4	3 326 906.248 4
47	262 372.83	4 599 920.16	58 892 126.18	2 536.766 0	149 936.249 2	3 176 526.840 0
48	253 436.24	4 347 547.83	54 282 306.02	2 630.669 4	147 398.484 2	3 028 591.660 8
49	244 624.00	4 094 111.66	49 934 668.19	2 732.529 2	144 767.624 3	2 876 193.106 6

Tabel 2 sambungan

Nilai Simbol Kumutasi, CSO  $\frac{2}{2}$

$s$	$D_s$	$N_s$	$B_s$	$C_s$	$M_s$	$R_s$
50	235 925.04	3 849 487.59	46 840 346.00	2 835.022 1	142 035.095 6	2 731 425.481 8
51	227 835.15	3 613 562.55	41 991 059.01	2 943.137 4	139 109.473 5	2 589 890.355 2
52	218 847.25	3 380 227.40	38 377 496.43	3 053.177 2	136 250.336 1	2 450 190.912 7
53	210 456.33	3 167 380.15	34 991 209.06	3 168.222 9	133 203.158 9	2 313 934.576 6
54	202 155.03	2 966 928.82	31 823 868.91	3 283.812 1	130 034.938 0	2 180 731.417 7
55	193 940.61	2 754 768.79	28 866 965.09	3 401.912 1	126 751.123 9	2 050 696.431 7
56	185 808.43	2 560 828.18	26 112 196.30	3 522.090 1	123 349.210 8	1 923 945.357 8
57	177 754.43	2 375 019.75	23 551 568.12	3 641.783 5	119 827.120 7	1 800 595.147 0
58	169 777.17	2 197 255.32	21 176 348.37	3 761.096 8	116 185.337 2	1 680 769.026 3
59	161 874.57	2 027 488.15	18 979 083.05	3 880.185 4	112 423.640 4	1 564 583.589 1
60	154 046.23	1 865 618.58	16 951 594.90	3 996.199 9	108 543.465 0	1 452 160.045 7
61	146 292.80	1 711 507.35	15 085 981.82	4 107.708 0	104 547.265 1	1 343 616.593 7
62	138 616.97	1 565 274.55	12 374 418.97	4 216.876 6	100 439.547 1	1 239 069.358 6
63	131 019.40	1 426 657.58	11 809 139.42	4 315.413 8	96 222.871 1	1 138 629.791 8
64	123 508.39	1 295 638.18	10 282 431.84	4 407.831 2	91 907.467 3	1 042 400.920 4
65	116 088.15	1 172 129.79	9 085 843.68	4 489.449 7	87 499.626 1	950 499.403 1
66	108 767.29	1 056 041.04	7 914 713.87	4 558.728 2	83 010.176 4	862 999.837 0
67	101 553.70	947 274.35	6 868 672.23	4 613.189 3	78 461.448 2	779 889.660 6
68	94 455.845	845 718.651	5 911 897.883	4 650.462 1	73 838.258 9	701 538.212 4
69	87 311.050	751 258.106	5 068 679.233	4 670.014 3	69 187.808 3	627 699.953 5
70	80 706.625	663 742.056	4 314 426.126	4 669.226 0	64 517.792 5	558 512.146 7
71	74 068.942	583 035.431	3 650 684.070	4 644.235 4	59 843.566 5	493 994.354 3
72	67 418.148	508 966.489	3 067 648.639	4 595.428 1	55 204.331 1	434 145.787 7
73	61 378.498	441 248.341	2 558 682.150	4 520.662 7	50 608.908 0	378 941.456 6
74	55 244.921	379 974.843	2 117 333.809	4 418.349 2	46 088.240 8	328 332.553 6
75	49 187.528	324 618.922	1 737 358.966	4 288.286 9	41 609.991 1	282 244.313 3
76	44 089.787	275 081.396	1 412 740.044	4 130.220 2	37 381.704 2	240 874.322 2
77	38 884.206	230 941.609	1 137 708.648	3 944.961 8	33 251.484 0	203 192.618 0
78	33 990.850	192 057.403	906 767.039	3 733.725 2	29 306.622 2	169 941.134 0
79	29 428.077	158 066.563	714 709.666	3 498.684 1	25 572.796 4	140 624.611 5
80	25 311.636	128 638.476	556 643.088	3 243.115 8	22 074.112 3	115 081.816 4
81	21 353.602	103 426.840	428 004.807	2 970.736 8	18 830.996 5	92 987 703 1
82	17 862.047	82 073.238	324 577.787	2 686.492 0	15 860.259 7	74 156.706 6
83	14 789.984	64 211.191	242 504.529	2 395.321 2	13 178.857 7	58 200.446 9
84	11 985.151	49 471.207	178 298.338	2 103.866 1	10 778.536 5	45 122.589 2
85	9 589.474 6	37 486.066 1	128 822.180 6	1 816.194 6	8 675.180 4	34 344.052 7
86	7 539.390 5	27 396.581 5	91 336.074 5	1 540.039 4	6 858.985 8	25 606.872 3
87	5 815.463 2	20 357.191 0	63 439.493 0	1 280.145 4	5 318.946 4	18 809.586 6
88	4 393.477 3	14 541.727 3	42 082.303 0	1 041.564 6	4 038.801 0	13 490.940 1
89	3 244.764 6	10 148.250 5	28 540.574 2	837.621 6	2 997.236 4	9 452.139 1
90	2 337.992 9	6 903.495 9	18 392.323 7	640.937 7	2 169.614 9	6 454.902 7
91	1 640.030 9	4 565.508 0	11 488.827 8	482.773 0	1 528.677 2	4 285.287 8
92	1 117.257 1	2 925.472 1	6 923.324 8	352.770 7	1 045.904 2	2 768.610 8
93	737.234 3	1 908.215 0	3 997.852 7	249.339 1	695.133 3	1 710.706 4
94	499.918 8	1 070.978 7	2 189.637 7	170.088 2	443.794 4	1 017.372 9
95	288.365 7	601.082 9	1 118.659 0	111.467 3	273.705 6	573.778 5
96	169.864 6	312.687 2	517.596 1	74.109 3	162.237 3	300.072 9
97	91.611 7	142.832 6	204.898 9	40.001 9	88.128 0	137.833 1
98	40.375 5	51.220 9	62.066 3	28.545 1	39.126 1	49.707 1
99	10.845 4	10.845 4	10.845 4	10.541 0	10.541 0	10.541 0

TABEL MAKEHAM

fungsi Hidup Gabungan

CSO 1941  $2\frac{1}{2}\%$

x	$d_{1+x}$	$d_{1+x}$	$c^x$	x
30	20,63897	18,48172	12,054	30
31	20,27405	18,11153	14,109	31
32	19,00413	17,73708	15,366	32
33	19,52951	17,35885	16,730	33
34	19,15026	16,97680	18,228	34
35	18,76695	16,59181	19,852	35
36	18,37945	16,20371	21,622	36
37	17,98838	15,81326	23,549	37
38	17,59385	15,42063	25,618	38
39	17,19500	15,02593	27,934	39
40	16,79545	14,63009	30,424	40
41	16,39232	14,23310	33,136	41
42	15,98714	13,83565	36,089	42
43	15,58011	13,43796	39,306	43
44	15,17182	13,04019	42,809	44
45	14,76233	12,64403	46,625	45
46	14,35245	12,24878	50,781	46
47	13,94244	11,85524	55,307	47
48	13,53291	11,46409	60,230	48
49	13,12403	11,07548	65,605	49
50	12,71660	10,69038	71,453	50
51	12,31105	10,30898	77,822	51
52	11,90770	9,93180	84,758	52
53	11,50720	9,55942	92,313	53
54	11,11010	9,19240	100,541	54
55	10,71670	8,83102	109,502	55
56	10,32771	8,47580	119,262	56
57	9,94354	8,12727	129,892	57
58	9,56463	7,78572	141,470	58
59	9,19140	7,45161	154,079	59
60	8,82458	7,12530	167,812	60
61	8,46435	6,80713	182,770	61
62	8,11113	6,49731	199,060	62
63	7,76562	6,19648	216,803	63
64	7,42783	5,90444	236,127	64