When using the normal distribution, choose the nearest $z$-value to find the probability, or if the probability is given, choose the nearest $z$-value. No interpolation should be used.

Example: If the given $z$-value is 0.759 , and you need to find $\operatorname{Pr}(Z<0.759)$ from the normal distribution table, then choose the probability for $z$-value $=0.76: \operatorname{Pr}(Z<0.76)=0.7764$.

Unless specified otherwise, when using the normal approximation to a discrete distribution, use the continuity correction.

## NORMAL DISTRIBUTION TABLE

Entries represent the area under the standardized normal distribution from $-\infty$ to $z, \operatorname{Pr}(Z<z)$
The value of $z$ to the first decimal is given in the left column. The second decimal place is given in the top row.

| 2 | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0 | 0.5000 | 0.5040 | 0.5080 | 0.5120 | 0.5160 | 0.5199 | 0.5239 | 0.5279 | 0.5319 | 0.5359 |
| 0.1 | 0.5398 | 0.5438 | 0.5478 | 0.5517 | 0.5557 | 0.5596 | 0.5636 | 0.5675 | 0.5714 | 0.5753 |
| 0.2 | 0.5793 | 0.5832 | 0.5871 | 0.5910 | 0.5948 | 0.5987 | 0.6026 | 0.6064 | 0.6103 | 0.6141 |
| 0.3 | 0.6179 | 0.6217 | 0.6255 | 0.6293 | 0.6331 | 0.6368 | 0.6406 | 0.6443 | 0.6480 | 0.6517 |
| 0.4 | 0.6554 | 0.6591 | 0.6628 | 0.6664 | 0.6700 | 0.6736 | 0.6772 | 0.6808 | 0.6844 | 0.6879 |
| 0.5 | 0.6915 | 0.6950 | 0.6985 | 0.7019 | 0.7054 | 0.7088 | 0.7123 | 0.7157 | 0.7190 | 0.7224 |
| 0.6 | 0.7257 | 0.7291 | 0.7324 | 0.7357 | 0.7389 | 0.7422 | 0.7454 | 0.7486 | 0.7517 | 0.7549 |
| 0.7 | 0.7580 | 0.7611 | 0.7642 | 0.7673 | 0.7704 | 0.7734 | 0.7764 | 0.7794 | 0.7823 | 0.7852 |
| 0.8 | 0.7881 | 0.7910 | 0.7939 | 0.7967 | 0.7995 | 0.8023 | 0.8051 | 0.8078 | (0.8106 | 0.8133 |
| 0.9 | 0.8159 | 0.8186 | 0.8212 | 0.8238 | 0.8264 | 0.8289 | 0.8315 | 0.8340 | 0.8365 | 0.8389 |
| 1.0 | 0.8413 | 0.8438 | 0.8461 | 0.8485 | 0.8508 | 0.8531 | 0.8554 | 0.8577 | 0.8599 | 0.8621 |
| 1.1 | 0.8643 | 0.8665 | 0.8686 | 0.8708 | 0.8729 | 0.8749 | 0.8770 | 0.8790 | 0.8810 | 0.8830 |
| 1.2 | 0.8849 | 0.8869 | 0.8888 | 0.8907 | 0.8925 | 0.8944 | 0.8962 | 0.8980 | 0.8997 | 0.9015 |
| 1.3 | 0.9032 | 0.9049 | 0.9066 | 0.9082 | 0.9099 | 0.9115 | 0.9131 | 0.9147 | 0.9162 | 0.9177 |
| 1.4 | 0.9192 | 0.9207 | 0.9222 | 0.9236 | 0.9251 | 0.9265 | 0.9279 | 0.9292 | 0.9306 | 0.9319 |
| 1.5 | 0.9332 | 0.9345 | 0.9357 | 0.9370 | 0.9382 | 0.9394 | 0.9406 | 0.9418 | 0.9429 | 0.9441 |
| 1.6 | 0.9452 | 0.9463 | 0.9474 | 0.9484 | 0.9495 | 0.9505 | 0.9515 | 0.9525 | 0.9535 | 0.9545 |
| 1.7 | 0.9554 | 0.9564 | 0.9573 | 0.9582 | 0.9591 | 0.9599 | 0.9608 | 0.9616 | 0.9625 | 0.9633 |
| 1.8 | 0.9641 | 0.9649 | 0.9656 | 0.9664 | 0.9671 | 0.9678 | 0.9686 | 0.9693 | 0.9699 | 0.9706 |
| 1.9 | 0.9713 | 0.9719 | 0.9726 | 0.9732 | 0.9738 | 0.9744 | 0.9750 | 0.9756 | 0.9761 | 0.9767 |
| 2.0 | 0.9772 | 0.9778 | 0.9783 | 0.9788 | 0.9793 | 0.9798 | 0.9803 | 0.9808 | 0.9812 | 0.9817 |
| 2.1 | 0.9821 | 0.9826 | 0.9830 | 0.9834 | 0.9838 | 0.9842 | 0.9846 | 0.9850 | 0.9854 | 0.9857 |
| 2.2 | 0.9861 | 0.9864 | 0.9868 | 0.9871 | 0.9875 | 0.9878 | 0.9881 | 0.9884 | 0.9887 | 0.9890 |
| 2.3 | 0.9893 | 0.9896 | 0.9898 | 0.9901 | 0.9904 | 0.9906 | 0.9909 | 0.9911 | 0.9913 | 0.9916 |
| 2.4 | 0.9918 | 0.9920 | 0.9922 | 0.9925 | 0.9927 | 0.9929 | 0.9931 | 0.9932 | 0.9934 | 0.9936 |
| 2.5 | 0.9938 | 0.9940 | 0.9941 | 0.9943 | 0.9945 | 0.9946 | 0.9948 | 0.9949 | 0.9951 | 0.9952 |
| 2.6 | 0.9953 | 0.9955 | 0.9956 | 0.9957 | 0.9959 | 0.9960 | 0.9961 | 0.9962 | 0.9963 | 0.9964 |
| 2.7 | 0.9965 | 0.9966 | 0.9967 | 0.9968 | 0.9969 | 0.9970 | 0.9971 | 0.9972 | 0.9973 | 0.9974 |
| 2.8 | 0.9974 | 0.9975 | 0.9976 | 0.9977 | 0.9977 | 0.9978 | 0.9979 | 0.9979 | 0.9980 | 0.9981 |
| 2.9 | 0.9981 | 0.9982 | 0.9982 | 0.9983 | 0.9984 | 0.9984 | 0.9985 | 0.9985 | 0.9986 | 0.9986 |
| 3.0 | 0.9987 | 0.9987 | 0.9987 | 0.9988 | 0.9988 | 0.9989 | 0.9989 | 0.9989 | 0.9990 | 0.9990 |
| 3.1 | 0.9990 | 0.9991 | 0.9991 | 0.9991 | 0.9992 | 0.9992 | 0.9992 | 0.9992 | 0.9993 | 0.9993 |
| 3.2 | 0.9993 | 0.9993 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9994 | 0.9995 | 0.9995 | 0.9995 |
| 3.3 | 0.9995 | 0.9995 | 0.9995 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9996 | 0.9997 |
| 3.4 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9997 | 0.9998 |
| 3.5 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 | 0.9998 |
| 3.6 | 0.9998 | 0.9998 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 |
| 3.7 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | '0.9999 | 0.9999 | 0.9999 | 0.9999 |
| 3.8 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 | 0.9999 |
| 3.9 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |


| Values of $z$ for selected values of $\operatorname{Pr}(Z<z)$ |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| $Z$ | 0.842 | 1.036 | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 |
| $\operatorname{Pr}(Z<z)$ | 0.800 | 0.850 | 0.900 | 0.950 | 0.975 | 0.990 | 0.995 |

Illustrative Life Table: Basic Functions and Single Benefit Premiums at $\boldsymbol{i}=0.06$

| $\boldsymbol{X}$ | $I_{x}$ | $1000 g_{x}$ | $\ddot{a}_{x}$ | $1000 A_{x}$ | $\left.1000{ }^{2} A_{x}\right)$ | $1000{ }_{5} E_{x}$ | $1000{ }_{10} E_{X}$ | $1000{ }_{20} E_{x}$ | $\boldsymbol{K}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 10,000,000 | 20.42 | 16.8010 | 49.00 | 25.92 | 728.54 | 541.95 | 299.89 | 0 |
| 5 | 9,749,503 | 0.98 | 17.0379 | 35.59 | 8.45 | 743.89 | 553.48 | 305.90 | 5 |
| 10 | 9,705,588 | 0.85 | 16.9119 | 42.72 | 9.37 | 744.04 | 553.34 | 305.24 | 10 |
| 15 | 9,663,731 | 0.91 | 16.7384 | 52.55 | 11.33 | 743.71 | 552.69 | 303.96 | 15 |
| 20 | 9,617,802 | 1.03 | 16.5133 | 65.28 | 14.30 | 74316 | 551.64 | 301.93 | 20 |
| 21 | 9,607,896 | 1.05 | 16.4611 | 68.24 | 15.06 | 743.01 | 551.36 | 301.40 | 21 |
| 22 | 9,597,695 | 1.10 | 16.4061 | 71.35 | 15.87 | 742.86 | 551.06 | 300.82 | 22 |
| 23 | 9,587,169 | 1.13 | 16.3484 | 74.62 | 16.76 | 742.68 | 550.73 | 300.19 | 23 |
| 24 | 9,576,288 | 1.18 | 16.2878 | 78.05 | 17.71 | 742.49 | 550.36 | 299.49 | 24 |
| 25 | 9,565,017 | 1.22 | 16.2242 | 81.65 | 18.75 | 742.29 | 549.97 | 298.73 | 25 |
| 26 | 9,553,319 | 1.27 | 16.1574 | 85.43 | 19.87 | 742.06 | 549.53 | 297.90 | 26 |
| 27 | 9,541,153 | 1.33 | 16.0873 | 89.40 | 21.07 | 741.81 | 549.05 | 297.00 | 27 |
| 28 | 9,528,475 | 1.39 | 16.0139 | 93.56 | 22.38 | 741.54 | 548.53 | 296.01 | 28 |
| 29 | 9,515,235 | 1.46 | 15.9368 | 97.92 | 23.79 | 741.24 | 547.96 | 294.92 | 29 |
| 30 | 9,501,381 | 1.53 | 15.8561 | 102.48 | 25.31 | 740.91 | 547.33 | 293.74 | 30 |
| 31 | 9,486,854 | 1.61 | 15.7716 | 107.27 | 26.95 | 740.55 | 546.65 | 292.45 | 31 |
| 32 | 9,471,591 | 1.70 | 15.6831 | 112.28 | 28.72 | 740.16 | 545.90 | 291.04 | 32 |
| 33 | 9,455,522 | 1.79 | 15.5906 | 117.51 | 30.63 | 739.72 | 545.07 | 289.50 | 33 |
| 34 | 9,438,571 | 1.90 | 15.4938 | 122.99 | 32.68 | 739.25 | 544.17 | 287.82 | 34 |
| 35 | 9,420,657 | 2.01 | 15.3926 | 128.72 | 34.88 | 738.73 | 543.18 | 286.00 | 35 |
| 36 | 9,401,688 | 2.14 | 15.2870 | 134.70 | 37.26 | 738.16 | 542.11 | 284.00 | 36 |
| 37 | 9,381,566 | 228 | 15.1767 | 140.94 | 39.81 | 737.54 | 540.92 | 281.84 | 37 |
| 38 | 9,360,184 | 2.43 | 15.0616 | 147.46 | 42.55 | 736.86 | 539.63 | 279.48 | 38 |
| 39 | 9,337,427 | 2.60 | 14.9416 | 154.25 | 45.48 | 736.11 | 538.22 | 276.92 | 39 |
| 40 | 9,313,166 | 2.78 | 14.8166 | 161.32 | 48.63 | 735.29 | 536.67 | 274.14 | 40 |
| 41 | 9,287,264 | 2.98 | 14.6864 | 168.69 | 52.01 | 734.40 | 534.99 | 271.12 | 41 |
| 42 | 9,259,571 | 3.20 | 14.5510 | 176.36 | 55.62 | 733.42 | 533.14 | 26785 | 42 |
| 43 | 9,229,925 | 3.44 | 14.4102 | 184.33 | 59.48 | 732.34 | 531.12 | 264.31 | 43 |
| 44 | 9,198,149 | 3.71 | 14.2639 | 192.61 | 63.61 | 731.17 | 528.92 | 260.48 | 44 |
| 45 | 9,164,051 | 4.00 | 14.1121 | 201.20 | 68.02 | 729.88 | 526.52 | 256.34 | 45 |
| 46 | 9, 127,426 | 4.31 | 13.9546 | 210.12 | 72.72 | 728.47 | 523.89 | 251.88 | 46 |
| 47 | 9,088,049 | 4.66 | 13.7914 | 219.36 | 77.73 | 726.93 | 521.03 | 247.08 | 47 |
| 48 | 9,045,679 | 5.04 | 13.6224 | 228.92 | 83.06 | 725.24 | 517.91 | 241.93 | 48 |
| 49 | 9,000,057 | 5.46 | 13.4475 | 238.82 | 88.73 | 723.39 | 514.51 | 236.39 | 49 |
| 50 | 8,950,901 | 5.92 | 13.2668 | 249.05 | 94.76 | 721.37 | 510.81 | 230.47 | 50 |
| 51 | 8,897,913 | 6.42 | 13.0803 | 259.61 | 101.15 | 719.17 | 506.78 | 224.15 | 51 |
| 52 | 8,840,770 | 6.97 | 12.8879 | 270.50 | 107.92 | 716.76 | 502.40 | 217.42 | 52 |
| 53 | 8,779,128 | 7.58 | 12.6896 | 281.72 | 115.09 | 714.12 | 497.64 | 210.27 | 53 |
| 54 | 8,712,621 | 8.24 | 12.4856 | 293.27 | 122.67 | 711.24 | 492.47 | 202.70 | 54 |
| 55 | 8,640,861 | 8.96 | 12.2758 | 305.14 | 130.67 | 708.10 | 486.86 | 194.72 | 55 |
| 56 | 8,563,435 | 9.75 | 12.0604 | 317.33 | 139.11 | 704.67 | 480.79 | 186.32 | 56 |
| 57 | 8,479,908 | 10.62 | 11.8395 | 329.84 | 147.99 | 700.93 | 474.22 | 177.53 | 57 |
| 58 | 8,389,826 | 11.58 | 11.6133 | 342.65 | 157.33 | 696.85 | 467.12 | 168.37 | 58 |
| 59 | 8,292,713 | 12.62 | 11.3818 | 355.75 | 167.13 | 692.41 | 459.46 | 158.87 | $59^{\circ}$ |
| 0 | 8,188,074 | 13.76 | 11.1454 | 369.13 | 177.41 | 687.56 | 451.20 | 149.06 | 60 |
| 61 | 8,075,403 | 15.01 | 10.9041 | 382.79 | 188.17 | 682.29 | 442.31 | 13900 | 61 |
| 2 | 7,954,179 | 16.38 | 10.6584 | 396.70 | 199.41 | 676.56 | 432.77 | 128.75 | 62 |
| 3 | 7,823,879 | 17.88 | 10.4084 | 41085 | 211.13 | 670.33 | 422.54 | 118.38 | 63 |
| 4 | 7,683,979 | 19.52 | 10.1544 | 425.22 | 223.34 | 663.56 | 411.61 | 107.97 | 64 |
| 5 | 7,533,964 | 21.32 | 9.8969 | 439.80 | 236.03 | 656.23 | 399.94 | 97.60 | 65 |

Illustrative Life Table: Basic Functions and Single Benefit Premiums at $\boldsymbol{i}=0.06$

| $\boldsymbol{x}$ | $I_{x}$ | $1000 q_{x}$ | $\ddot{a}_{x}$ | 1000Ax | $1000\left({ }^{2} A_{x}\right)$ | $1000{ }_{5} E_{x}$ | $1000{ }_{10} E_{x}$ | $1000{ }_{20} E_{X}$ | $\boldsymbol{X}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 7,373,338 | 23.29 | 9.6362 | 454.56 | 24920 | 648.27 | 387.53 | 87.37 | 66 |
| 67 | 7,201,635 | 25.44 | 9.3726 | 469.47 | 262.83 | 639.66 | 374.36 | 77.38 | 67 |
| 68 | 7,018,432 | 27.79 | 9.1066 | 484.53 | 276.92 | 630.35 | 360.44 | 67.74 | 68 |
| 69 | 6,823,367 | 30.37 | 8.8387 | 499.70 | 291.46 | 620.30 | 345.77 | 58.54 | 69 |
| 70 | 6,616,155 | 33.18 | 8.5693 | 514.95 | 306.42 | 60946 | 330.37 | 49.88 | 70 |
| 71 | 6,396,609 | 36.26 | 8.2988 | 530.26 | 321.78 | 597.79 | 314.27 | 41.86 | 71 |
| 72 | 6,164,663 | 39.62 | 8.0278 | 545.60 | 337.54 | 585.25 | 297.51 | 34.53 | 72 |
| 73 | 5,920,394 | 43.30 | 7.7568 | 560.93 | 353.64 | 571.81 | 280.17 | 27.96 | 73 |
| 74 | 5,664,051 | 47.31 | 7.4864 | 576.24 | 370.08 | 557.43 | 262.31 | 22.19 | 74 |
| 75 | 5,396,081 | 51.69 | 7.2170 | 591.49 | 386.81 | 542.07 | 244.03 | 17.22 | 75 |
| 76 | 5,117,152 | 56.47 | 6.9493 | 606.65 | 403.80 | 525.71 | 225.46 | 13.04 | 76 |
| 77 | 4,828,182 | 61.68 | 6.6836 | 621.68 | 421.02 | 508.35 | 206.71 | 9.61 | 77 |
| 78 | 4,530,360 | 67.37 | 6.4207 | 636.56 | 438.42 | 489.97 | 187.94 | 6.88 | 78 |
| 79 | 4,225,163 | 73.56 | 6.1610 | 651.26 | 455.95 | 470.57 | 169.31 | 4.77 | 79 |
| 80 | 3,914,365 | 80.30 | 5.9050 | 665.75 | 473.59 | 450.19 | 15100 | 3.19 | 80 |
| 81 | 3,600,038 | 87.64 | 5.6533 | 680.00 | 491.27 | 428.86 | 133.19 | 2.05 | 81 |
| 82 | 3,284,542 | 95.61 | 5.4063 | 693.98 | 508.96 | 406.62 | 116.06 | 1.27 | 82 |
| 83 | 2,970,496 | 104.28 | 5.1645 | 707.67 | 526.60 | 383.57 | 99.81 | 0.75 | 83 |
| 84 | 2,660,734 | 113.69 | 4.9282 | 721.04 | 544.15 | 359.79 | 84.59 | 0.42 | 84 |
| 85 | 2,358,246 | 123.89 | 4.6980 | 734.07 | 561.57 | 335.40 | 70.56 | 0.22 | 85 |
| 86 | 2,066,090 | 134.94 | 4.4742 | 746.74 | 578.80 | 310.56 | 57.83 | 0.11 | 86 |
| 87 | 1,787,299 | 146.89 | 4.2571 | 759.03 | 595.79 | 285.44 | 46.50 | 0.05 | 87 |
| 88 | 1,524,758 | 159.81 | 4.0470 | 770.92 | 612.51 | 260.21 | 36.61 | 0.02 | 88 |
| 89 | 1,281,083 | 173.75 | 3.8442 | 782.41 | 628.92 | 235.11 | 28.17 | 0.01 | 89 |
| 90 | 1,058,491 | 188.77 | 3.6488 | 793.46 | 644.96 | 210.36 | 21.13 | 0.00 | 90 |
| 91 | 858,676 | 204.93 | 3.4611 | 804.09 | 660.61 | 186.21 | 15.41 | 0.00 | 91 |
| 92 | 682,707 | 222.27 | 32812 | 814.27 | 675.83 | 162.90 | 10.91 | 0.00 | 92 |
| 93 | 530,959 | 240.86 | 3.1091 | 824.01 | 690.59 | 140.69 | 7.47 | 0.00 | 93 |
| 94 | 403,072 | 260.73 | 2.9450 | 833.30 | 704.86 | 119.79 | 4.93 | 0.00 | 94 |
| 95 | 297,981 | 281.91 | 2,7888 | 842.14 | 718.61 | 100.43 | 3.13 | 0.00 | 95 |
| 96 | 213,977 | 304.45 | 2.6406 | 850.53 | 731.83 | 82.78 | 1.90 | 0.00 | 96 |
| 97 | 148,832 | 328.34 | 2.5002 | 858.48 | 744.50 | 66.97 | 1.10 | 0.00 | 97 |
| 98 | 99,965 | 353.60 | 2.3676 | 865.99 | 756.60 | 53.09 | 0.60 | 0.00 | 98 |
| 99 | 64,617 | 380.20 | 2.2426 | 873.06 | 768.13 | 41.14 | 0.31 | 0.00 | 99 |
| 100 | 40,049 | 408.12 | 2.1252 | 879.70 | 77908 | 31.12 | 0.15 | 0.00 | 100 |
| 101 | 23,705 | 437.28 | 2.0152 | 885.93 | 789.44 | 22.91 | 0.07 | 0.00 | 101 |
| 102 | 13,339 | 467.61 | 1.9123 | 891.76 | 799.21 | 16.37 | 0.03 | 0.00 | 102 |
| 103 | 7,101 | 498.99 | 1.8164 | 897.19 | 808.41 | 11.33 | 0.01 | 0.00 | 103 |
| 104 | 3,558 | 531.28 | 1.7273 | 902.23 | 817.02 | 7.56 | 0.00 | 0.00 | 104 |
| 105 | 1,668 | 564.29 | 1.6447 | 906.90 | 825.06 | 4.86 | 0.00 | 0.00 | 105 |
| 106 | 727 | 597.83 | 1.5685 | 911.22 | 832.53 | 2.99 | 0.00 | 0.00 | 106 |
| 107 | 292 | 631.64 | 1.4984 | 915.19 | 839.46 | 1.76 | 0.00 | 000 | 107 |
| 108 | 108 | 665.45 | 1.4341 | 918.82 | 845.84 | 0.98 | 0.00 | 0.00 | 108 |
| 109 | 36 | 698.97 | 1.3755 | 922.14 | 851.69 | 0.52 | 0.00 | 0.00 | 109 |
| 110 | 11 | 731.87 | 1.3223 | 925.15 | 857.04 | 0.26 | 0.00 | 0.00 | 110 |

Illustrative Life Table: Basic Functions and Single Benefit Premiums at $\boldsymbol{i}=0.06$
Lives are independent.

| $x$ | $\ddot{a}_{x x}$ | $1000 A_{x x}$ | $\left.1000{ }^{2} A_{x x}\right)$ | $\ddot{z}_{x: X+10}$ | $1000 A_{x: x+10}$ | $1000\left({ }^{2} A_{x=x+10}\right)$ | $x$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 16.1345 | 86.73 | 50.89 | 16.2844 | 78.24 | 34.71 | 0 |
| 5 | 16.6432 | 57.93 | 16.51 | 16.4093 | 71.17 | 19.17 | 5 |
| 10 | 16.4660 | 67.96 | 18.13 | 16.1541 | 85.62 | 22.70 | 10 |
| 15 | 16.2187 | 81.96 | 21.67 | 15.8187 | 104.60 | 28.49 | 15 |
| 20 | 15.9005 | 99.97 | 27.00 | 15.3934 | 128.67 | 37.00 | 20 |
| 21 | 15.8272 | 104.12 | 28.33 | 15.2962 | 134.18 | 39.11 | 21 |
| 22 | 15.7502 | 108.48 | 29.77 | 15.1945 | 139.94 | 41.39 | 22 |
| 23 | 15.6696 | 113.04 | 31.33 | 15.0883 | 145.95 | 43.83 | 23 |
| 24 | 15.5851 | 117.82 | 33.01 | 14.9774 | 152.22 | 46.46 | 24 |
| 25 | 15.4967 | 122.83 | 34.82 | 14.8617 | 158.77 | 49.28 | 25 |
| 26 | 15.4041 | 128.07 | 36.77 | 14.7411 | 165.60 | 52.31 | 26 |
| 27 | 15.3073 | 133.55 | 38.87 | 14.6154 | 172.71 | 55.56 | 27 |
| 28 | 15.2062 | 139.27 | 41.12 | 14.4845 | 180.12 | 59.03 | 28 |
| 29 | 15.1005 | 145.26 | 43.55 | 14.3484 | 187.83 | 62.75 | 29 |
| 30 | 14.9901 | 151.50 | 46.16 | 14.2068 | 195.84 | 66.72 | 30 |
| 31 | 14.8750 | 158.02 | 48.96 | 14.0598 | 204.16 | 70.97 | 31 |
| 32 | 14.7549 | 164.82 | 51.96 | 13.9071 | 212.80 | 75.50 | 32 |
| 33 | 14.6298 | 171.90 | 55.18 | 13.7488 | 221.76 | 80.34 | 33 |
| 34 | 14.4995 | 179.27 | 58.63 | 13.5848 | 231.05 | 85.48 | 34 |
| 35 | 14.3640 | 186.94 | 62.32 | 13.4150 | 240.66 | 90.96 | 35 |
| 36 | 14.2230 | 194.92 | 66.26 | 13.2393 | 250.60 | 96.78 | 36 |
| 37 | 14.0766 | 203.21 | 70.48 | 13.0579 | 260.88 | 102.96 | 37 |
| 38 | 13.9246 | 211.81 | 74.98 | 12.8705 | 271.48 | 109.52 | 38 |
| 39 | 13.7670 | 220.74 | 79.77 | 12.6774 | 282.41 | 116.46 | 39 |
| 40 | 13.6036 | 229.99 | 84.89 | 12.4784 | 293.68 | 123.80 | 40 |
| 41 | 13.4344 | 239.56 | 90.32 | 12.2737 | 305.26 | 131.56 | 41 |
| 42 | 13.2594 | 249.47 | 96.11 | 12.0633 | 317.17 | 139.75 | 42 |
| 43 | 13.0786 | 259.70 | 102.25 | 11.8474 | 329.39 | 148.38 | 43 |
| 44 | 12.8919 | 270.27 | 108.76 | 11.6260 | 341.92 | 157.46 | 44 |
| 45 | 12.6994 | 281.16 | 115.66 | 11.3994 | 354.75 | 166.99 | 45 |
| 46 | 12.5011 | 292.39 | 122.95 | 11.1677 | 367.87 | 177.00 | 46 |
| 47 | 12.2971 | 303.94 | 130.67 | 10.9310 | 381.26 | 187.48 | 47 |
| 48 | 12.0873 | 315.81 | 138.80 | 10.6898 | 394.92 | 198.44 | 48 |
| 49 | 11.8720 | 328.00 | 147.38 | 10.4441 | 408.82 | 209.88 | 49 |
| 50 | 11.6513 | 340.49 | 156.41 | 10.1944 | 422.96 | 221.81 | 50 |
| 51 | 11.4252 | 353.29 | 165.89 | 9.9409 | 437.31 | 234.22 | 51 |
| 52 | 11.1941 | 366.37 | 175.85 | 9.6840 | 451.85 | 247.10 | 52 |
| 53 | 10.9580 | 379.74 | 186.28 | 9.4240 | 466.57 | 260.46 | 53 |
| 54 | 10.7172 | 393.37 | 197.18 | 9.1614 | 481.43 | 274.27 | 54 |
| 55 | 10.4720 | 407.24 | 208.57 | 8.8966 | 496.42 | 28854 | 55 |
| 56 | 10.2227 | 421.35 | 220.44 | 8.6301 | 511.50 | 303.24 | 56 |
| 57 | 9.9696 | 435.68 | 232.79 | 8.3623 | 526.66 | 318.35 | 57 |
| 58 | 9.7131 | 450.20 | 245.62 | 8.0938 | 541.86 | 333.85 | 58 |
| 59 | 9.4535 | 464.90 | 258.93 | 7.8249 | 557.08 | 349.73 | 59 |
| 60 | 9.1911 | 479.75 | 272.69 | 7.5563 | 572.28 | 365.94 | 60 |
| 61 | 8.9266 | 494.72 | 286.91 | 7.2885 | 587.44 | 382.46 | 61 |
| 62 | 8.6602 | 509.80 | 301.56 | 7.0221 | 602.53 | 399.26 | 62 |
| 63 | 8.3926 | 524.95 | 316.62 | 6.7574 | 617.50 | 416.30 | 63 |
| 64 | 8.1241 | 540.15 | 332.09 | 6.4952 | 632.34 | 433.53 | 64 |
| 65 | 7.8552 | 555.36 | 347.92 | 6.2360 | 647.02 | 450.93 | 65 |

Illustrative Life Table: Basic Functions and Single Benefit Premiums at $i=0.06$
Lives are independent.

| $x$ | $\ddot{z a x}_{x}$ | $1000 A_{x x}$ | $\left.1000{ }^{2} A_{x x}\right)$ | $\ddot{a}_{x \times x+10}$ | $1000 A_{x: x+10}$ | $1000\left({ }^{2} A_{x: x+10}\right)$ | $x$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66 | 7.5866 | 570.57 | 364.09 | 5.9802 | 661.50 | 468.44 | 66 |
| 67 | 7.3187 | 585.74 | 380.58 | 5.7283 | 675.76 | 486.02 | 67 |
| 68 | 7.0520 | 600.83 | 397.35 | 5.4809 | 689.76 | 503.62 | 68 |
| 69 | 6.7872 | 615.82 | 414.36 | 5.2385 | 703.48 | 521.21 | 69 |
| 70 | 6.5247 | 630.68 | 431.58 | 5.0014 | 716.90 | 538.72 | 70 |
| 71 | 6.2650 | 645.37 | 448.96 | 4.7701 | 730.00 | 556.11 | 71 |
| 72 | 6.0088 | 659.88 | 466.46 | 4.5450 | 742.74 | 573.34 | 72 |
| 73 | 5.7565 | 674.16 | 484.03 | 4.3263 | 755.11 | 590.36 | 73 |
| 74 | 5.5086 | 688.19 | 501.64 | 4.1146 | 767.10 | 607.12 | 74 |
| 75 | 5.2655 | 701.95 | 519.23 | 3.9099 | 778.69 | 623.59 | 75 |
| 76 | 5.0278 | 715.41 | 536.75 | 3.7125 | 789.86 | 639.71 | 76 |
| 77 | 4.7959 | 728.54 | 554.16 | 3.5227 | 800.60 | 655.46 | 77 |
| 78 | 4.5700 | 741.32 | 571.41 | 3.3406 | 810.91 | 670.79 | 78 |
| 79 | 4.3507 | 753.74 | 588.45 | 3.1663 | 820.78 | 685.67 | 79 |
| 80 | 4.1381 | 765.77 | 605.25 | 2.9998 | 830.20 | 700.08 | 80 |
| 81 | 3.9326 | 777.40 | 621.75 | 2.8412 | 839.18 | 713.99 | 81 |
| 82 | 3.7344 | 788.62 | 637.91 | 2.6905 | 847.71 | 727.37 | 82 |
| 83 | 3.5438 | 799.41 | 653.70 | 2.5476 | 855.80 | 740.21 | 83 |
| 84 | 3.3607 | 809.77 | 669.08 | 2.4125 | 863.44 | 752.49 | 84 |
| 85 | 3.1855 | 819.69 | 684.02 | 2.2851 | 870.66 | 764.20 | 85 |
| 86 | 3.0181 | 829.16 | 698.48 | 2.1652 | 877.44 | 775.34 | 86 |
| 87 | 2.8587 | 838.19 | 712.45 | 2.0527 | 883.81 | 785.89 | 87 |
| 88 | 2.7071 | 846.77 | 725.89 | 1.9475 | 889.77 | 795.86 | 88 |
| 89 | 2.5633 | 854.91 | 738.79 | 1.8493 | 895.33 | 805.25 | 89 |
| 90 | 2.4274 | 862.60 | 751.14 | 1.7579 | 900.50 | 814.05 | 90 |
| 91 | 2.2991 | 869.86 | 762.91 | 1.6731 | 905.30 | 822.29 | 91 |
| 92 | 2.1784 | 876.70 | 774.11 | 1.5947 | 90973 | 829.96 | 92 |
| 3 | 2.0651 | 883.11 | 784.73 | 1.5225 | 913.82 | 837.07 | 93 |
| 34 | 1.9590 | 889.11 | 794.77 | 1.4563 | 917.57 | 843.64 | 94 |
| 5 | 1.8600 | 894.72 | 804.22 | 1.3957 | 921.00 | 849.67 | 95 |
| 7 | 1.7678 | 899.93 | 813.09 | 1.3407 | 924.11 | 855.20 | 96 |
| 7 | 1.6823 | 904.77 | 821.39 | 1.2908 | 926.93 | 860.21 | 97 |
| 8 | 1.6032 | 909.25 | 829.12 | 12460 | 929.47 | 864.75 | 98 |
|  | 1.5304 | 913.38 | 836.29 | 1.2060 | 931.73 | 868.81 | 99 |
|  | 1.4634 | 917.16 | 842.92 | 1.1706 | 933.74 | 872.43 | 100 |
|  | 1.4023 | 920.63 | 849.02 | 1.1395 | 935.50 | 875.61 | 101 |
|  | 1.3466 | 923.78 | 854.60 | 1.1124 | 937.03 | 878.39 | 102 |
|  | 1.2962 | 926.63 | 859.67 | 1.0892 | 938.35 | 880.78 | 103 |
|  | 1.2509 | 929.20 | 864.26 | 1.0695 | 939.46 | 882.81 | 104 |
|  | 1.2103 | 931.49 | 868.38 | 1.0531 | 940.39 | 884.50 | 105 |
|  | 1.1744 | 933.53 | 872.04 | 1.0397 | 941.15 | 885.89 | 106 |
|  | 1.1428 | 935.32 | 875.27 | 1.0289 | 941.76 | 887.00 | 107 |
|  | 1.1153 | 936.87 | 878.10 | 1.0205 | 942.24 | 887.87 | 108 |
|  | 1.0916 | 938.21 | 880.53 | 1.0141 | 942.60 | 888.54 | 109 |
|  | 1.0715 | 939.35 | 882.60 | 1.0093 | 942.87 | 889.03 | 110 |



