كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

| Z | قيم Z(row) ( صف ) |
|---|---|
| قيم Z (column) عمود | قيم الاحتمال |

**الحالة الأولى : الاحتمال الأقل من**

1.P(Z < -1.67) = 0.04746

| z | -0.09 | -0.08 | -0.07 | -0.06 | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | -0.00 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **-3.50** | 0.00017 | 0.00017 | 0.00018 | 0.00019 | 0.00019 | 0.00020 | 0.00021 | 0.00022 | 0.00022 | 0.00023 | **-3.50** |
| **-3.40** | 0.00024 | 0.00025 | 0.00026 | 0.00027 | 0.00028 | 0.00029 | 0.00030 | 0.00031 | 0.00032 | 0.00034 | **-3.40** |
| **-3.30** | 0.00035 | 0.00036 | 0.00038 | 0.00039 | 0.00040 | 0.00042 | 0.00043 | 0.00045 | 0.00047 | 0.00048 | **-3.30** |
| **-3.20** | 0.00050 | 0.00052 | 0.00054 | 0.00056 | 0.00058 | 0.00060 | 0.00062 | 0.00064 | 0.00066 | 0.00069 | **-3.20** |
| **-3.10** | 0.00071 | 0.00074 | 0.00076 | 0.00079 | 0.00082 | 0.00084 | 0.00087 | 0.00090 | 0.00094 | 0.00097 | **-3.10** |
| **-3.00** | 0.00100 | 0.00104 | 0.00107 | 0.00111 | 0.00114 | 0.00118 | 0.00122 | 0.00126 | 0.00131 | 0.00135 | **-3.00** |
| **-2.90** | 0.00139 | 0.00144 | 0.00149 | 0.00154 | 0.00159 | 0.00164 | 0.00169 | 0.00175 | 0.00181 | 0.00187 | **-2.90** |
| **-2.80** | 0.00193 | 0.00199 | 0.00205 | 0.00212 | 0.00219 | 0.00226 | 0.00233 | 0.00240 | 0.00248 | 0.00256 | **-2.80** |
| **-2.70** | 0.00264 | 0.00272 | 0.00280 | 0.00289 | 0.00298 | 0.00307 | 0.00317 | 0.00326 | 0.00336 | 0.00347 | **-2.70** |
| **-2.60** | 0.00357 | 0.00368 | 0.00379 | 0.00391 | 0.00402 | 0.00415 | 0.00427 | 0.00440 | 0.00453 | 0.00466 | **-2.60** |
| **-2.50** | 0.00480 | 0.00494 | 0.00508 | 0.00523 | 0.00539 | 0.00554 | 0.00570 | 0.00587 | 0.00604 | 0.00621 | **-2.50** |
| **-2.40** | 0.00639 | 0.00657 | 0.00676 | 0.00695 | 0.00714 | 0.00734 | 0.00755 | 0.00776 | 0.00798 | 0.00820 | **-2.40** |
| **-2.30** | 0.00842 | 0.00866 | 0.00889 | 0.00914 | 0.00939 | 0.00964 | 0.00990 | 0.01017 | 0.01044 | 0.01072 | **-2.30** |
| **-2.20** | 0.01101 | 0.01130 | 0.01160 | 0.01191 | 0.01222 | 0.01255 | 0.01287 | 0.01321 | 0.01355 | 0.01390 | **-2.20** |
| **-2.10** | 0.01426 | 0.01463 | 0.01500 | 0.01539 | 0.01578 | 0.01618 | 0.01659 | 0.01700 | 0.01743 | 0.01786 | **-2.10** |
| **-2.00** | 0.01831 | 0.01876 | 0.01923 | 0.01970 | 0.02018 | 0.02068 | 0.02118 | 0.02169 | 0.02222 | 0.02275 | **-2.00** |
| **-1.90** | 0.02330 | 0.02385 | 0.02442 | 0.02500 | 0.02559 | 0.02619 | 0.02680 | 0.02743 | 0.02807 | 0.02872 | **-1.90** |
| **-1.80** | 0.02938 | 0.03005 | 0.03074 | 0.03144 | 0.03216 | 0.03288 | 0.03362 | 0.03438 | 0.03515 | 0.03593 | **-1.80** |
| **-1.70** | 0.03673 | 0.03754 | 0.03836 | 0.03920 | 0.04006 | 0.04093 | 0.04182 | 0.04272 | 0.04363 | 0.04457 | **-1.70** |
| **-1.60** | 0.04551 | 0.04648 | 0.04746 | 0.04846 | 0.04947 | 0.05050 | 0.05155 | 0.05262 | 0.05370 | 0.05480 | **-1.60** |
| **-1.50** | 0.05592 | 0.05705 | 0.05821 | 0.05938 | 0.06057 | 0.06178 | 0.06301 | 0.06426 | 0.06552 | 0.06681 | **-1.50** |
| **-1.40** | 0.06811 | 0.06944 | 0.07078 | 0.07215 | 0.07353 | 0.07493 | 0.07636 | 0.07780 | 0.07927 | 0.08076 | **-1.40** |
| **-1.30** | 0.08226 | 0.08379 | 0.08534 | 0.08691 | 0.08851 | 0.09012 | 0.09176 | 0.09342 | 0.09510 | 0.09680 | **-1.30** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

2. $P(Z \leq 0.64) = 0.73891$

عمود  صف

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

3. $P(Z < 2) = P(Z < 2.00) = 0.97725$

محمود  صف

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

3. P(Z < 1.46852) = P(Z < 1.47) =0.92922

صف ثم عمود

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

**الحالة الثانية : الاحتمال الأكبر من**

1. P( Z > 2.15)= مكمله = 1-P(Z < 2.15) = 1- 0.98422= 0.01578

صف ثم عمود

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

2. P( Z ≥ - 2.17)= مكمله = 1-P(Z < -2.17) = 1- 0.01500 = 0.98500

| z | -0.09 | -0.08 | -0.07 | -0.06 | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | -0.00 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **-3.50** | 0.00017 | 0.00017 | 0.00018 | 0.00019 | 0.00019 | 0.00020 | 0.00021 | 0.00022 | 0.00022 | 0.00023 | **-3.50** |
| **-3.40** | 0.00024 | 0.00025 | 0.00026 | 0.00027 | 0.00028 | 0.00029 | 0.00030 | 0.00031 | 0.00032 | 0.00034 | **-3.40** |
| **-3.30** | 0.00035 | 0.00036 | 0.00038 | 0.00039 | 0.00040 | 0.00042 | 0.00043 | 0.00045 | 0.00047 | 0.00048 | **-3.30** |
| **-3.20** | 0.00050 | 0.00052 | 0.00054 | 0.00056 | 0.00058 | 0.00060 | 0.00062 | 0.00064 | 0.00066 | 0.00069 | **-3.20** |
| **-3.10** | 0.00071 | 0.00074 | 0.00076 | 0.00079 | 0.00082 | 0.00084 | 0.00087 | 0.00090 | 0.00094 | 0.00097 | **-3.10** |
| **-3.00** | 0.00100 | 0.00104 | 0.00107 | 0.00111 | 0.00114 | 0.00118 | 0.00122 | 0.00126 | 0.00131 | 0.00135 | **-3.00** |
| **-2.90** | 0.00139 | 0.00144 | 0.00149 | 0.00154 | 0.00159 | 0.00164 | 0.00169 | 0.00175 | 0.00181 | 0.00187 | **-2.90** |
| **-2.80** | 0.00193 | 0.00199 | 0.00205 | 0.00212 | 0.00219 | 0.00226 | 0.00233 | 0.00240 | 0.00248 | 0.00256 | **-2.80** |
| **-2.70** | 0.00264 | 0.00272 | 0.00280 | 0.00289 | 0.00298 | 0.00307 | 0.00317 | 0.00326 | 0.00336 | 0.00347 | **-2.70** |
| **-2.60** | 0.00357 | 0.00368 | 0.00379 | 0.00391 | 0.00402 | 0.00415 | 0.00427 | 0.00440 | 0.00453 | 0.00466 | **-2.60** |
| **-2.50** | 0.00480 | 0.00494 | 0.00508 | 0.00523 | 0.00539 | 0.00554 | 0.00570 | 0.00587 | 0.00604 | 0.00621 | **-2.50** |
| **-2.40** | 0.00639 | 0.00657 | 0.00676 | 0.00695 | 0.00714 | 0.00734 | 0.00755 | 0.00776 | 0.00798 | 0.00820 | **-2.40** |
| **-2.30** | 0.00842 | 0.00866 | 0.00889 | 0.00914 | 0.00939 | 0.00964 | 0.00990 | 0.01017 | 0.01044 | 0.01072 | **-2.30** |
| **-2.20** | 0.01101 | 0.01130 | 0.01160 | 0.01191 | 0.01222 | 0.01255 | 0.01287 | 0.01321 | 0.01355 | 0.01390 | **-2.20** |
| **-2.10** | [illegible] | [illegible] | 0.01500 | 0.01539 | 0.01578 | 0.01618 | 0.01659 | 0.01700 | 0.01743 | 0.01786 | **-2.10** |
| **-2.00** | 0.01831 | 0.01876 | 0.01923 | 0.01970 | 0.02018 | 0.02068 | 0.02118 | 0.02169 | 0.02222 | 0.02275 | **-2.00** |
| **-1.90** | 0.02330 | 0.02385 | 0.02442 | 0.02500 | 0.02559 | 0.02619 | 0.02680 | 0.02743 | 0.02807 | 0.02872 | **-1.90** |
| **-1.80** | 0.02938 | 0.03005 | 0.03074 | 0.03144 | 0.03216 | 0.03288 | 0.03362 | 0.03438 | 0.03515 | 0.03593 | **-1.80** |
| **-1.70** | 0.03673 | 0.03754 | 0.03836 | 0.03920 | 0.04006 | 0.04093 | 0.04182 | 0.04272 | 0.04363 | 0.04457 | **-1.70** |
| **-1.60** | 0.04551 | 0.04648 | 0.04746 | 0.04846 | 0.04947 | 0.05050 | 0.05155 | 0.05262 | 0.05370 | 0.05480 | **-1.60** |
| **-1.50** | 0.05592 | 0.05705 | 0.05821 | 0.05938 | 0.06057 | 0.06178 | 0.06301 | 0.06426 | 0.06552 | 0.06681 | **-1.50** |
| **-1.40** | 0.06811 | 0.06944 | 0.07078 | 0.07215 | 0.07353 | 0.07493 | 0.07636 | 0.07780 | 0.07927 | 0.08076 | **-1.40** |
| **-1.30** | 0.08226 | 0.08379 | 0.08534 | 0.08691 | 0.08851 | 0.09012 | 0.09176 | 0.09342 | 0.09510 | 0.09680 | **-1.30** |

**الحالة الثالثه : الاحتمال بين قيمتين**

1.P (0.42 < Z < 1.68) =

=P(Z <1.68) – P(Z< 0.42)

= 0.95352 – 0.66276 = 0.29076

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | [illegible] | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | [illegible] | [illegible] | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | [illegible] | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | [illegible] | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | [illegible] | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | [illegible] | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

1.P (- 3.07 < Z < 1.46) =

=P(Z <1.46) – P(Z< -3.07)

= 0.92785– 0.00107 = 0.92678

| z | -0.09 | -0.08 | -0.07 | -0.06 | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | -0.00 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **-3.50** | 0.00017 | 0.00017 | 0.00018 | 0.00019 | 0.00019 | 0.00020 | 0.00021 | 0.00022 | 0.00022 | 0.00023 | **-3.50** |
| **-3.40** | 0.00024 | 0.00025 | 0.00026 | 0.00027 | 0.00028 | 0.00029 | 0.00030 | 0.00031 | 0.00032 | 0.00034 | **-3.40** |
| **-3.30** | 0.00035 | 0.00036 | 0.00038 | 0.00039 | 0.00040 | 0.00042 | 0.00043 | 0.00045 | 0.00047 | 0.00048 | **-3.30** |
| **-3.20** | 0.00050 | 0.00052 | 0.00054 | 0.00056 | 0.00058 | 0.00060 | 0.00062 | 0.00064 | 0.00066 | 0.00069 | **-3.20** |
| **-3.10** | 0.00071 | 0.00074 | 0.00076 | 0.00079 | 0.00082 | 0.00084 | 0.00087 | 0.00090 | 0.00094 | 0.00097 | **-3.10** |
| **-3.00** | 0.00100 | 0.00104 | 0.00107 | 0.00111 | 0.00114 | 0.00118 | 0.00122 | 0.00126 | 0.00131 | 0.00135 | **-3.00** |
| **-2.90** | 0.00139 | 0.00144 | 0.00149 | 0.00154 | 0.00159 | 0.00164 | 0.00169 | 0.00175 | 0.00181 | 0.00187 | **-2.90** |
| **-2.80** | 0.00193 | 0.00199 | 0.00205 | 0.00212 | 0.00219 | 0.00226 | 0.00233 | 0.00240 | 0.00248 | 0.00256 | **-2.80** |
| **-2.70** | 0.00264 | 0.00272 | 0.00280 | 0.00289 | 0.00298 | 0.00307 | 0.00317 | 0.00326 | 0.00336 | 0.00347 | **-2.70** |
| **-2.60** | 0.00357 | 0.00368 | 0.00379 | 0.00391 | 0.00402 | 0.00415 | 0.00427 | 0.00440 | 0.00453 | 0.00466 | **-2.60** |
| **-2.50** | 0.00480 | 0.00494 | 0.00508 | 0.00523 | 0.00539 | 0.00554 | 0.00570 | 0.00587 | 0.00604 | 0.00621 | **-2.50** |
| **-2.40** | 0.00639 | 0.00657 | 0.00676 | 0.00695 | 0.00714 | 0.00734 | 0.00755 | 0.00776 | 0.00798 | 0.00820 | **-2.40** |
| **-2.30** | 0.00842 | 0.00866 | 0.00889 | 0.00914 | 0.00939 | 0.00964 | 0.00990 | 0.01017 | 0.01044 | 0.01072 | **-2.30** |
| **-2.20** | 0.01101 | 0.01130 | 0.01160 | 0.01191 | 0.01222 | 0.01255 | 0.01287 | 0.01321 | 0.01355 | 0.01390 | **-2.20** |
| **-2.10** | 0.01426 | 0.01463 | 0.01500 | 0.01539 | 0.01578 | 0.01618 | 0.01659 | 0.01700 | 0.01743 | 0.01786 | **-2.10** |
| **-2.00** | 0.01831 | 0.01876 | 0.01923 | 0.01970 | 0.02018 | 0.02068 | 0.02118 | 0.02169 | 0.02222 | 0.02275 | **-2.00** |
| **-1.90** | 0.02330 | 0.02385 | 0.02442 | 0.02500 | 0.02559 | 0.02619 | 0.02680 | 0.02743 | 0.02807 | 0.02872 | **-1.90** |
| **-1.80** | 0.02938 | 0.03005 | 0.03074 | 0.03144 | 0.03216 | 0.03288 | 0.03362 | 0.03438 | 0.03515 | 0.03593 | **-1.80** |
| **-1.70** | 0.03673 | 0.03754 | 0.03836 | 0.03920 | 0.04006 | 0.04093 | 0.04182 | 0.04272 | 0.04363 | 0.04457 | **-1.70** |
| **-1.60** | 0.04551 | 0.04648 | 0.04746 | 0.04846 | 0.04947 | 0.05050 | 0.05155 | 0.05262 | 0.05370 | 0.05480 | **-1.60** |
| **-1.50** | 0.05592 | 0.05705 | 0.05821 | 0.05938 | 0.06057 | 0.06178 | 0.06301 | 0.06426 | 0.06552 | 0.06681 | **-1.50** |
| **-1.40** | 0.06811 | 0.06944 | 0.07078 | 0.07215 | 0.07353 | 0.07493 | 0.07636 | 0.07780 | 0.07927 | 0.08076 | **-1.40** |
| **-1.30** | 0.08226 | 0.08379 | 0.08534 | 0.08691 | 0.08851 | 0.09012 | 0.09176 | 0.09342 | 0.09510 | 0.09680 | **-1.30** |

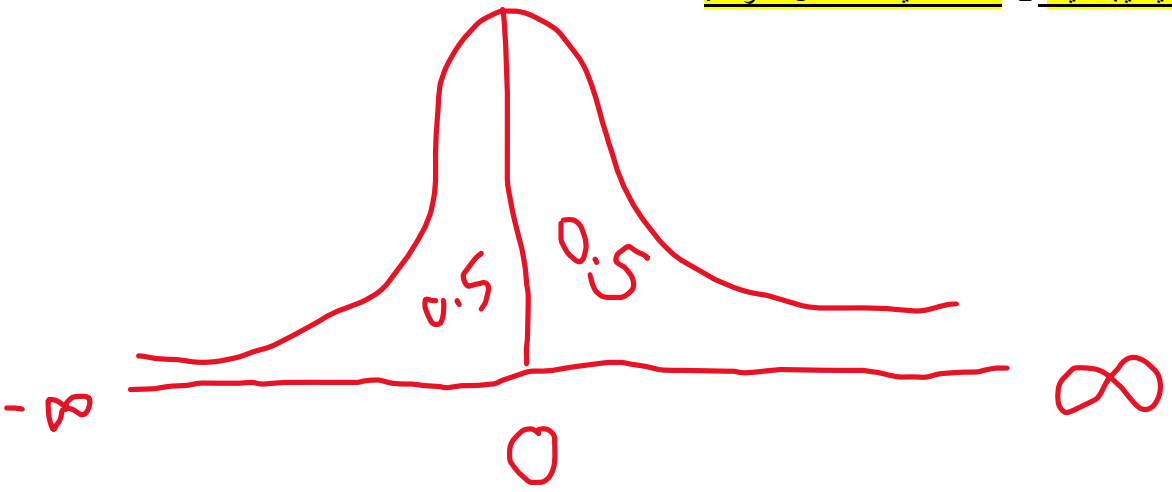
| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

الحالة الرابعه : المساواه

P(Z = 1.26)=0 ,P(Z = -0.26)= 0 , P( Z = 3.11)= 0

# كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

كيفية ايجاد قيمة Z اذا كانت قيمة الاحتمال معلومة :




اذا كانت قيمة الاحتمال أقل من 0.5

قيمة Z سالبة

اذا كان قيمة الاحتمال اكبر من 0.5

قيمة Z موجبة

Z مجهولة

$P(Z < K) = 0.94845$

$K = Z_{0.94845} = 1.63$

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

P(Z< k) =0.02169

K = $Z_{0.02169} = -2.02$

| z | -0.09 | -0.08 | -0.07 | -0.06 | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | -0.00 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **-3.50** | 0.00017 | 0.00017 | 0.00018 | 0.00019 | 0.00019 | 0.00020 | 0.00021 | 0.00022 | 0.00022 | 0.00023 | **-3.50** |
| **-3.40** | 0.00024 | 0.00025 | 0.00026 | 0.00027 | 0.00028 | 0.00029 | 0.00030 | 0.00031 | 0.00032 | 0.00034 | **-3.40** |
| **-3.30** | 0.00035 | 0.00036 | 0.00038 | 0.00039 | 0.00040 | 0.00042 | 0.00043 | 0.00045 | 0.00047 | 0.00048 | **-3.30** |
| **-3.20** | 0.00050 | 0.00052 | 0.00054 | 0.00056 | 0.00058 | 0.00060 | 0.00062 | 0.00064 | 0.00066 | 0.00069 | **-3.20** |
| **-3.10** | 0.00071 | 0.00074 | 0.00076 | 0.00079 | 0.00082 | 0.00084 | 0.00087 | 0.00090 | 0.00094 | 0.00097 | **-3.10** |
| **-3.00** | 0.00100 | 0.00104 | 0.00107 | 0.00111 | 0.00114 | 0.00118 | 0.00122 | 0.00126 | 0.00131 | 0.00135 | **-3.00** |
| **-2.90** | 0.00139 | 0.00144 | 0.00149 | 0.00154 | 0.00159 | 0.00164 | 0.00169 | 0.00175 | 0.00181 | 0.00187 | **-2.90** |
| **-2.80** | 0.00193 | 0.00199 | 0.00205 | 0.00212 | 0.00219 | 0.00226 | 0.00233 | 0.00240 | 0.00248 | 0.00256 | **-2.80** |
| **-2.70** | 0.00264 | 0.00272 | 0.00280 | 0.00289 | 0.00298 | 0.00307 | 0.00317 | 0.00326 | 0.00336 | 0.00347 | **-2.70** |
| **-2.60** | 0.00357 | 0.00368 | 0.00379 | 0.00391 | 0.00402 | 0.00415 | 0.00427 | 0.00440 | 0.00453 | 0.00466 | **-2.60** |
| **-2.50** | 0.00480 | 0.00494 | 0.00508 | 0.00523 | 0.00539 | 0.00554 | 0.00570 | 0.00587 | 0.00604 | 0.00621 | **-2.50** |
| **-2.40** | 0.00639 | 0.00657 | 0.00676 | 0.00695 | 0.00714 | 0.00734 | 0.00755 | 0.00776 | 0.00798 | 0.00820 | **-2.40** |
| **-2.30** | 0.00842 | 0.00866 | 0.00889 | 0.00914 | 0.00939 | 0.00964 | 0.00990 | 0.01017 | 0.01044 | 0.01072 | **-2.30** |
| **-2.20** | 0.01101 | 0.01130 | 0.01160 | 0.01191 | 0.01222 | 0.01255 | 0.01287 | 0.01321 | 0.01355 | 0.01390 | **-2.20** |
| **-2.10** | 0.01426 | 0.01463 | 0.01500 | 0.01539 | 0.01578 | 0.01618 | 0.01659 | 0.01700 | 0.01743 | 0.01786 | **-2.10** |
| **-2.00** | 0.01831 | 0.01876 | 0.01923 | 0.01970 | 0.02018 | 0.02068 | 0.02118 | 0.02169 | 0.02222 | 0.02275 | **-2.00** |
| **-1.90** | 0.02330 | 0.02385 | 0.02442 | 0.02500 | 0.02559 | 0.02619 | 0.02680 | 0.02743 | 0.02807 | 0.02872 | **-1.90** |
| **-1.80** | 0.02938 | 0.03005 | 0.03074 | 0.03144 | 0.03216 | 0.03288 | 0.03362 | 0.03438 | 0.03515 | 0.03593 | **-1.80** |
| **-1.70** | 0.03673 | 0.03754 | 0.03836 | 0.03920 | 0.04006 | 0.04093 | 0.04182 | 0.04272 | 0.04363 | 0.04457 | **-1.70** |
| **-1.60** | 0.04551 | 0.04648 | 0.04746 | 0.04846 | 0.04947 | 0.05050 | 0.05155 | 0.05262 | 0.05370 | 0.05480 | **-1.60** |
| **-1.50** | 0.05592 | 0.05705 | 0.05821 | 0.05938 | 0.06057 | 0.06178 | 0.06301 | 0.06426 | 0.06552 | 0.06681 | **-1.50** |
| **-1.40** | 0.06811 | 0.06944 | 0.07078 | 0.07215 | 0.07353 | 0.07493 | 0.07636 | 0.07780 | 0.07927 | 0.08076 | **-1.40** |
| **-1.30** | 0.08226 | 0.08379 | 0.08534 | 0.08691 | 0.08851 | 0.09012 | 0.09176 | 0.09342 | 0.09510 | 0.09680 | **-1.30** |

P(Z < K) = 0.95

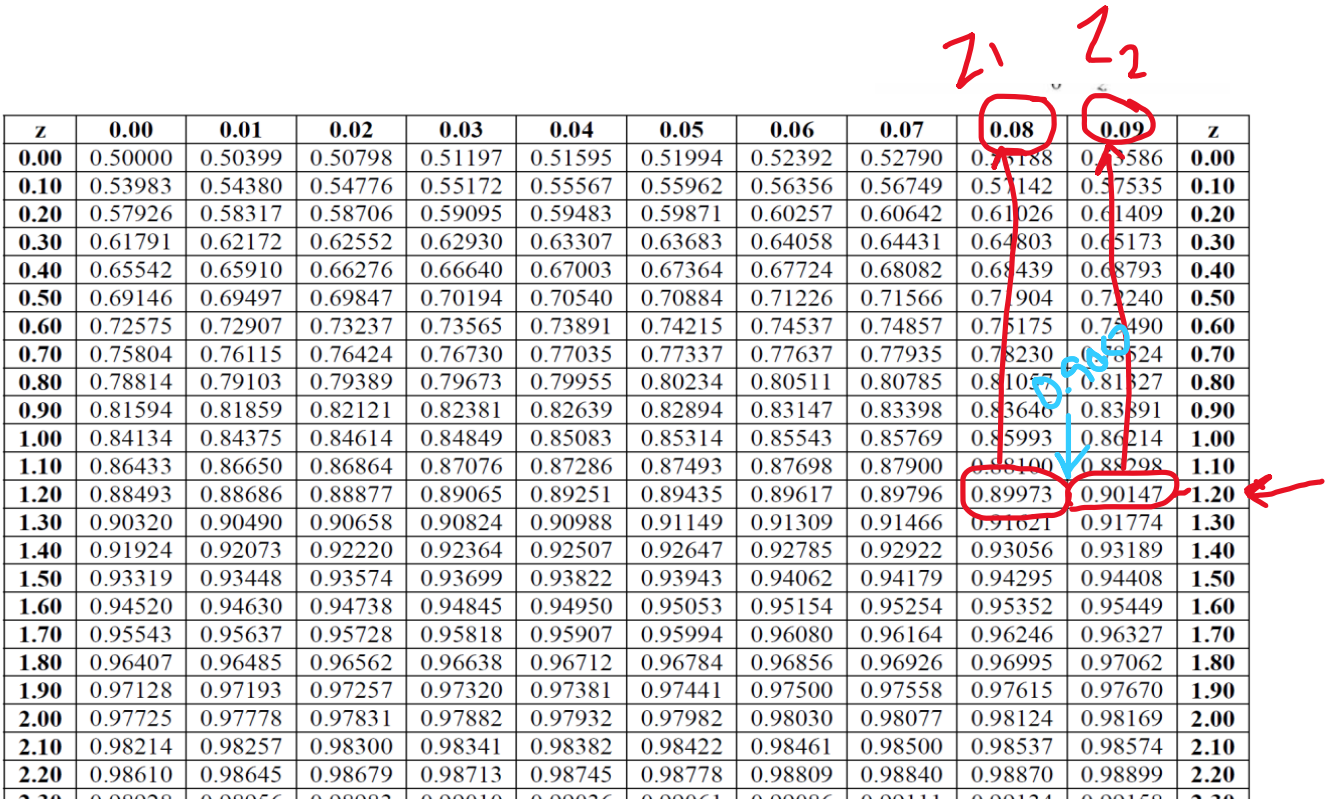
K= $Z_{0.95} = \frac{Z_1+Z_2}{2} = \frac{1.64+1.65}{2} = 1.645$

| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |

كيفية ايجاد قيم Z: الجدول يجد الاحتمال الأقل من فقط

P(Z < K) = 0.90

K= $Z_{0.90} = \frac{Z_1+Z_2}{2} = \frac{1.28+1.29}{2} = 1.285$




| z | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | z |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **0.00** | 0.50000 | 0.50399 | 0.50798 | 0.51197 | 0.51595 | 0.51994 | 0.52392 | 0.52790 | 0.53188 | 0.53586 | **0.00** |
| **0.10** | 0.53983 | 0.54380 | 0.54776 | 0.55172 | 0.55567 | 0.55962 | 0.56356 | 0.56749 | 0.57142 | 0.57535 | **0.10** |
| **0.20** | 0.57926 | 0.58317 | 0.58706 | 0.59095 | 0.59483 | 0.59871 | 0.60257 | 0.60642 | 0.61026 | 0.61409 | **0.20** |
| **0.30** | 0.61791 | 0.62172 | 0.62552 | 0.62930 | 0.63307 | 0.63683 | 0.64058 | 0.64431 | 0.64803 | 0.65173 | **0.30** |
| **0.40** | 0.65542 | 0.65910 | 0.66276 | 0.66640 | 0.67003 | 0.67364 | 0.67724 | 0.68082 | 0.68439 | 0.68793 | **0.40** |
| **0.50** | 0.69146 | 0.69497 | 0.69847 | 0.70194 | 0.70540 | 0.70884 | 0.71226 | 0.71566 | 0.71904 | 0.72240 | **0.50** |
| **0.60** | 0.72575 | 0.72907 | 0.73237 | 0.73565 | 0.73891 | 0.74215 | 0.74537 | 0.74857 | 0.75175 | 0.75490 | **0.60** |
| **0.70** | 0.75804 | 0.76115 | 0.76424 | 0.76730 | 0.77035 | 0.77337 | 0.77637 | 0.77935 | 0.78230 | 0.78524 | **0.70** |
| **0.80** | 0.78814 | 0.79103 | 0.79389 | 0.79673 | 0.79955 | 0.80234 | 0.80511 | 0.80785 | 0.81057 | 0.81327 | **0.80** |
| **0.90** | 0.81594 | 0.81859 | 0.82121 | 0.82381 | 0.82639 | 0.82894 | 0.83147 | 0.83398 | 0.83646 | 0.83891 | **0.90** |
| **1.00** | 0.84134 | 0.84375 | 0.84614 | 0.84849 | 0.85083 | 0.85314 | 0.85543 | 0.85769 | 0.85993 | 0.86214 | **1.00** |
| **1.10** | 0.86433 | 0.86650 | 0.86864 | 0.87076 | 0.87286 | 0.87493 | 0.87698 | 0.87900 | 0.88100 | 0.88298 | **1.10** |
| **1.20** | 0.88493 | 0.88686 | 0.88877 | 0.89065 | 0.89251 | 0.89435 | 0.89617 | 0.89796 | 0.89973 | 0.90147 | **1.20** |
| **1.30** | 0.90320 | 0.90490 | 0.90658 | 0.90824 | 0.90988 | 0.91149 | 0.91309 | 0.91466 | 0.91621 | 0.91774 | **1.30** |
| **1.40** | 0.91924 | 0.92073 | 0.92220 | 0.92364 | 0.92507 | 0.92647 | 0.92785 | 0.92922 | 0.93056 | 0.93189 | **1.40** |
| **1.50** | 0.93319 | 0.93448 | 0.93574 | 0.93699 | 0.93822 | 0.93943 | 0.94062 | 0.94179 | 0.94295 | 0.94408 | **1.50** |
| **1.60** | 0.94520 | 0.94630 | 0.94738 | 0.94845 | 0.94950 | 0.95053 | 0.95154 | 0.95254 | 0.95352 | 0.95449 | **1.60** |
| **1.70** | 0.95543 | 0.95637 | 0.95728 | 0.95818 | 0.95907 | 0.95994 | 0.96080 | 0.96164 | 0.96246 | 0.96327 | **1.70** |
| **1.80** | 0.96407 | 0.96485 | 0.96562 | 0.96638 | 0.96712 | 0.96784 | 0.96856 | 0.96926 | 0.96995 | 0.97062 | **1.80** |
| **1.90** | 0.97128 | 0.97193 | 0.97257 | 0.97320 | 0.97381 | 0.97441 | 0.97500 | 0.97558 | 0.97615 | 0.97670 | **1.90** |
| **2.00** | 0.97725 | 0.97778 | 0.97831 | 0.97882 | 0.97932 | 0.97982 | 0.98030 | 0.98077 | 0.98124 | 0.98169 | **2.00** |
| **2.10** | 0.98214 | 0.98257 | 0.98300 | 0.98341 | 0.98382 | 0.98422 | 0.98461 | 0.98500 | 0.98537 | 0.98574 | **2.10** |
| **2.20** | 0.98610 | 0.98645 | 0.98679 | 0.98713 | 0.98745 | 0.98778 | 0.98809 | 0.98840 | 0.98870 | 0.98899 | **2.20** |