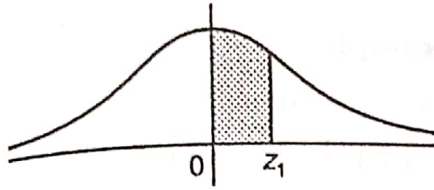# Area Under Standard Normal Curve



The table gives the area under the standard normal curve from $z = 0$ to $z = z_1$ which is the probability that $z$ will lie between $z = 0$ and $z = z_1$.

| z | .00 | .01 | .02 | .03 | .04 | .05 | .06 | .07 | .08 | .09 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | .0000 | .0040 | .0080 | .0120 | .0160 | .0199 | .0239 | .0279 | .0319 | .0359 |
| 0.1 | .0398 | .0438 | .0478 | .0517 | .0557 | .0596 | .0636 | .0675 | .0714 | .0753 |
| 0.2 | .0793 | .8832 | .0871 | .0910 | .0948 | .0987 | .1026 | .1064 | .1103 | .1141 |
| 0.3 | .1179 | .1217 | .1255 | .1293 | .1331 | .1368 | .1406 | .1443 | .1480 | .1517 |
| 0.4 | .1554 | .1591 | .1628 | .1664 | .1700 | .1736 | .1772 | .1808 | .1844 | .1879 |
| 0.5 | .1915 | .1950 | .1985 | .2019 | .2054 | .2088 | .2123 | .2157 | .2190 | .2224 |
| 0.6 | .2257 | .2291 | .2324 | .2357 | .2389 | .2422 | .2454 | .2486 | .2517 | .2549 |
| 0.7 | .2580 | .2611 | .2642 | .2673 | .2703 | .2734 | .2764 | .2794 | .2823 | .2852 |
| 0.8 | .2881 | .2910 | .2939 | .2967 | .2995 | .3023 | .3051 | .3078 | .3106 | .3133 |
| 0.9 | .3159 | .3186 | .3212 | .3238 | .3264 | .3289 | .3315 | .3340 | .3365 | .3389 |
| 1.0 | .3413 | .3438 | .3461 | .3485 | .3508 | .3531 | .3554 | .3577 | .3599 | .3621 |
| 1.1 | .3643 | .3665 | .3686 | .3708 | .3729 | .3749 | .3770 | .3790 | .3810 | .3830 |
| 1.2 | .3849 | .3869 | .3888 | .3907 | .3925 | .3944 | .3962 | .3980 | .3997 | .4015 |
| 1.3 | .4032 | .4049 | .4066 | .4082 | .4099 | .4115 | .4131 | .4147 | .4162 | .4177 |
| 1.4 | .4192 | .4207 | .4222 | .4236 | .4251 | .4265 | .4279 | .4292 | .4306 | .4319 |
| 1.5 | .4332 | .4345 | .4357 | .4370 | .4382 | .4394 | .4406 | .4418 | .4429 | .4441 |
| 1.6 | .4452 | .4463 | .4474 | .4484 | .4495 | .4505 | .4415 | .4525 | .4535 | .4545 |
| 1.7 | .4554 | .4564 | .4573 | .4582 | .4591 | .4599 | .4608 | .4616 | .4625 | .4633 |
| 1.8 | .4641 | .4649 | .4656 | .4664 | .4671 | .4678 | .4686 | .4693 | .4699 | .4706 |
| 1.9 | .4713 | .4719 | .4726 | .4732 | .4738 | .4744 | .4750 | .4756 | .4761 | .4767 |
| 2.0 | .4772 | .4778 | .4783 | .4788 | .4793 | .4798 | .4803 | .4808 | .4812 | .4817 |
| 2.1 | .4821 | .4826 | .4830 | .4834 | .4838 | .4842 | .4846 | .4850 | .4854 | .4857 |
| 2.2 | .4861 | .4864 | .4868 | .4871 | .4875 | .4878 | .4841 | .4884 | .4887 | .4890 |
| 2.3 | .4893 | .4896 | .4898 | .4901 | .4904 | .4906 | .4909 | .4911 | .4913 | .4916 |
| 2.4 | .4918 | .4920 | .4922 | .4925 | .4927 | .4929 | .4931 | .4932 | .4934 | .4936 |
| 2.5 | .4938 | .4940 | .4941 | .4943 | .4945 | .4946 | .4948 | .4949 | .4951 | .4952 |
| 2.6 | .4953 | .4955 | .4956 | .4957 | .4959 | .4560 | .4961 | .4962 | .4963 | .4964 |
| 2.7 | .4965 | .4966 | .4967 | .4968 | .4969 | .4970 | .4971 | .4972 | .4973 | .4974 |
| 2.8 | .4974 | .4975 | .4976 | .4977 | .4977 | .4978 | .4979 | .4979 | .4980 | .4981 |
| 2.9 | .4981 | .4982 | .4982 | .4983 | .4984 | .4984 | .4985 | .4985 | .4986 | .4986 |
| 3.0 | .4987 | .4987 | .4987 | .4988 | .4988 | .4989 | .4989 | .4989 | .4990 | .4990 |

# Percentage Points of $t$- distribution
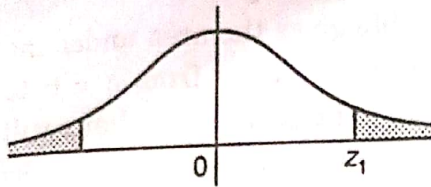
| $P$ / $F$ | 0.20 | 0.10 | 0.05 | 0.02 | 0.01 |
|---|---|---|---|---|---|
| 1 | 3.078 | 6.314 | 12.706 | 31.812 | 63.657 |
| 2 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 |
| 3 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 |
| 4 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 |
| 5 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 |
| 6 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 |
| 7 | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 |
| 8 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 |
| 9 | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 |
| 10 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 |
| 11 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 |
| 12 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 |
| 13 | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 |
| 14 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 |
| 15 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 |
| 16 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 |
| 17 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 |
| 18 | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 |
| 19 | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 |
| 20 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 |
| 21 | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 |
| 22 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 |
| 23 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 |
| 24 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 |
| 25 | 1.316 | 1.708 | 2.060 | 2.485 | 2.287 |
| 26 | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 |
| 27 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 |
| 28 | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 |
| 29 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 |
| 30 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 |
| 40 | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 |
| 60 | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 |
| 120 | 1.289 | 1.658 | 1.980 | 2.358 | 2.617 |
| ∞ | 1.282 | 1.645 | 1.960 | 2.325 | 2.576 |

# Percentage Points of $\chi^2$ - Distribution
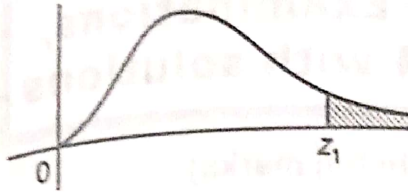


**Example**

For $\Phi = 10$ d. o. f.

$P(\chi^2 > 15.99) = 0.10$

| P / F | 0 = .99 | 0.95 | 0.50 | 0.10 | 0.05 | 0.02 | 0.01 |
|---|---|---|---|---|---|---|---|
| 1 | .000157 | .00393 | .455 | 2.706 | 3.841 | 5.214 | 6.635 |
| 2 | .0201 | .103 | 1.386 | 4.605 | 5.991 | 7.824 | 9.210 |
| 3 | .115 | .352 | 2.366 | 6.251 | 7.815 | 9.837 | 11.341 |
| 4 | .297 | .711 | 3.357 | 7.779 | 9.488 | 11.668 | 13.277 |
| 5 | .554 | 1.145 | 4.351 | 9.236 | 11.070 | 13.388 | 15.086 |
| 6 | .872 | 1.635 | 5.348 | 10.645 | 12.592 | 15.033 | 16.812 |
| 7 | 1.339 | 2.167 | 6.346 | 12.017 | 14.067 | 16.622 | 18.475 |
| 8 | 1.646 | 2.733 | 7.344 | 13.362 | 15.507 | 18.168 | 20.090 |
| 9 | 2.088 | 3.325 | 8.343 | 14.684 | 16.919 | 19.679 | 21.666 |
| 10 | 2.558 | 3.940 | 9.340 | 15.987 | 18.307 | 21.161 | 23.209 |
| 11 | 3.053 | 4.575 | 10.341 | 17.275 | 19.675 | 22.618 | 24.725 |
| 12 | 3 571 | 5.226 | 11.340 | 18.549 | 21.026 | 24.054 | 26.217 |
| 13 | 4.107 | 5.892 | 12.340 | 19.812 | 22.362 | 25.472 | 27.688 |
| 14 | 4.660 | 6.571 | 13.339 | 21.064 | 23.685 | 26.873 | 29.141 |
| 15 | 4.229 | 7.261 | 14.339 | 22.307 | 24.996 | 28.259 | 30.578 |
| 16 | 5.812 | 7.962 | 15.338 | 23.542 | 26.296 | 29.633 | 32.000 |
| 17 | 6.408 | 8.672 | 16.338 | 24.769 | 27.587 | 30.995 | 33.409 |
| 18 | 7.015 | 9.390 | 17.338 | 25.989 | 28.869 | 32.346 | 34.805 |
| 19 | 7.633 | 10.117 | 18.338 | 27.204 | 30.144 | 33.687 | 36.191 |
| 20 | 8.260 | 10.851 | 19.337 | 28.412 | 31.410 | 35.020 | 37.566 |
| 21 | 8.897 | 11.591 | 20.337 | 29.615 | 32.671 | 36.349 | 38.932 |
| 22 | 9.542 | 12.338 | 21.337 | 30.813 | 33.924 | 37.659 | 40.289 |
| 23 | 10.196 | 13.091 | 22.337 | 32.007 | 35.172 | 38.968 | 41.638 |
| 24 | 10.856 | 13.848 | 23.337 | 32.196 | 36.415 | 40.270 | 42 980 |
| 25 | 11.524 | 14.611 | 24.337 | 34.382 | 37.652 | 41.566 | 44.314 |
| 26 | 12.198 | 15.379 | 25.336 | 35.363 | 38.885 | 41.856 | 45.642 |
| 27 | 12.879 | 16.151 | 26.336 | 36.741 | 40.113 | 44.140 | 46.963 |
| 28 | 13.565 | 16.928 | 27.336 | 37.916 | 41.337 | 45.419 | 48.278 |
| 29 | 14.256 | 17.708 | 28.336 | 39.087 | 42.557 | 46.693 | 49.588 |
| 30 | 14.953 | 18 493 | 29.336 | 40.256 | 43.773 | 47.962 | 50.892 |