

**t Table**

| cum. prob | $t_{.50}$               | $t_{.75}$ | $t_{.80}$ | $t_{.85}$ | $t_{.90}$ | $t_{.95}$ | $t_{.975}$ | $t_{.99}$ | $t_{.995}$ | $t_{.999}$ | $t_{.9995}$ |
|-----------|-------------------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|------------|------------|-------------|
| one-tail  | 0.50                    | 0.25      | 0.20      | 0.15      | 0.10      | 0.05      | 0.025      | 0.01      | 0.005      | 0.001      | 0.0005      |
| two-tails | 1.00                    | 0.50      | 0.40      | 0.30      | 0.20      | 0.10      | 0.05       | 0.02      | 0.01       | 0.002      | 0.001       |
| df        |                         |           |           |           |           |           |            |           |            |            |             |
| 1         | 0.000                   | 1.000     | 1.376     | 1.963     | 3.078     | 6.314     | 12.71      | 31.82     | 63.66      | 318.31     | 636.62      |
| 2         | 0.000                   | 0.816     | 1.061     | 1.386     | 1.886     | 2.920     | 4.303      | 6.965     | 9.925      | 22.327     | 31.599      |
| 3         | 0.000                   | 0.765     | 0.978     | 1.250     | 1.638     | 2.353     | 3.182      | 4.541     | 5.841      | 10.215     | 12.924      |
| 4         | 0.000                   | 0.741     | 0.941     | 1.190     | 1.533     | 2.132     | 2.776      | 3.747     | 4.604      | 7.173      | 8.610       |
| 5         | 0.000                   | 0.727     | 0.920     | 1.156     | 1.476     | 2.015     | 2.571      | 3.365     | 4.032      | 5.893      | 6.869       |
| 6         | 0.000                   | 0.718     | 0.906     | 1.134     | 1.440     | 1.943     | 2.447      | 3.143     | 3.707      | 5.208      | 5.959       |
| 7         | 0.000                   | 0.711     | 0.896     | 1.119     | 1.415     | 1.895     | 2.365      | 2.998     | 3.499      | 4.785      | 5.408       |
| 8         | 0.000                   | 0.706     | 0.889     | 1.108     | 1.397     | 1.860     | 2.306      | 2.896     | 3.355      | 4.501      | 5.041       |
| 9         | 0.000                   | 0.703     | 0.883     | 1.100     | 1.383     | 1.833     | 2.262      | 2.821     | 3.250      | 4.297      | 4.781       |
| 10        | 0.000                   | 0.700     | 0.879     | 1.093     | 1.372     | 1.812     | 2.228      | 2.764     | 3.169      | 4.144      | 4.587       |
| 11        | 0.000                   | 0.697     | 0.876     | 1.088     | 1.363     | 1.796     | 2.201      | 2.718     | 3.106      | 4.025      | 4.437       |
| 12        | 0.000                   | 0.695     | 0.873     | 1.083     | 1.356     | 1.782     | 2.179      | 2.681     | 3.055      | 3.930      | 4.318       |
| 13        | 0.000                   | 0.694     | 0.870     | 1.079     | 1.350     | 1.771     | 2.160      | 2.650     | 3.012      | 3.852      | 4.221       |
| 14        | 0.000                   | 0.692     | 0.868     | 1.076     | 1.345     | 1.761     | 2.145      | 2.624     | 2.977      | 3.787      | 4.140       |
| 15        | 0.000                   | 0.691     | 0.866     | 1.074     | 1.341     | 1.753     | 2.131      | 2.602     | 2.947      | 3.733      | 4.073       |
| 16        | 0.000                   | 0.690     | 0.865     | 1.071     | 1.337     | 1.746     | 2.120      | 2.583     | 2.921      | 3.686      | 4.015       |
| 17        | 0.000                   | 0.689     | 0.863     | 1.069     | 1.333     | 1.740     | 2.110      | 2.567     | 2.898      | 3.646      | 3.965       |
| 18        | 0.000                   | 0.688     | 0.862     | 1.067     | 1.330     | 1.734     | 2.101      | 2.552     | 2.878      | 3.610      | 3.922       |
| 19        | 0.000                   | 0.688     | 0.861     | 1.066     | 1.328     | 1.729     | 2.093      | 2.539     | 2.861      | 3.579      | 3.883       |
| 20        | 0.000                   | 0.687     | 0.860     | 1.064     | 1.325     | 1.725     | 2.086      | 2.528     | 2.845      | 3.552      | 3.850       |
| 21        | 0.000                   | 0.686     | 0.859     | 1.063     | 1.323     | 1.721     | 2.080      | 2.518     | 2.831      | 3.527      | 3.819       |
| 22        | 0.000                   | 0.686     | 0.858     | 1.061     | 1.321     | 1.717     | 2.074      | 2.508     | 2.819      | 3.505      | 3.792       |
| 23        | 0.000                   | 0.685     | 0.858     | 1.060     | 1.319     | 1.714     | 2.069      | 2.500     | 2.807      | 3.485      | 3.768       |
| 24        | 0.000                   | 0.685     | 0.857     | 1.059     | 1.318     | 1.711     | 2.064      | 2.492     | 2.797      | 3.467      | 3.745       |
| 25        | 0.000                   | 0.684     | 0.856     | 1.058     | 1.316     | 1.708     | 2.060      | 2.485     | 2.787      | 3.450      | 3.725       |
| 26        | 0.000                   | 0.684     | 0.856     | 1.058     | 1.315     | 1.706     | 2.056      | 2.479     | 2.779      | 3.435      | 3.707       |
| 27        | 0.000                   | 0.684     | 0.855     | 1.057     | 1.314     | 1.703     | 2.052      | 2.473     | 2.771      | 3.421      | 3.690       |
| 28        | 0.000                   | 0.683     | 0.855     | 1.056     | 1.313     | 1.701     | 2.048      | 2.467     | 2.763      | 3.408      | 3.674       |
| 29        | 0.000                   | 0.683     | 0.854     | 1.055     | 1.311     | 1.699     | 2.045      | 2.462     | 2.756      | 3.396      | 3.659       |
| 30        | 0.000                   | 0.683     | 0.854     | 1.055     | 1.310     | 1.697     | 2.042      | 2.457     | 2.750      | 3.385      | 3.646       |
| 40        | 0.000                   | 0.681     | 0.851     | 1.050     | 1.303     | 1.684     | 2.021      | 2.423     | 2.704      | 3.307      | 3.551       |
| 60        | 0.000                   | 0.679     | 0.848     | 1.045     | 1.296     | 1.671     | 2.000      | 2.390     | 2.660      | 3.232      | 3.460       |
| 80        | 0.000                   | 0.678     | 0.846     | 1.043     | 1.292     | 1.664     | 1.990      | 2.374     | 2.639      | 3.195      | 3.416       |
| 100       | 0.000                   | 0.677     | 0.845     | 1.042     | 1.290     | 1.660     | 1.984      | 2.364     | 2.626      | 3.174      | 3.390       |
| 1000      | 0.000                   | 0.675     | 0.842     | 1.037     | 1.282     | 1.646     | 1.962      | 2.330     | 2.581      | 3.098      | 3.300       |
| <b>Z</b>  | 0.000                   | 0.674     | 0.842     | 1.036     | 1.282     | 1.645     | 1.960      | 2.326     | 2.576      | 3.090      | 3.291       |
|           | 0%                      | 50%       | 60%       | 70%       | 80%       | 90%       | 95%        | 98%       | 99%        | 99.8%      | 99.9%       |
|           | <b>Confidence Level</b> |           |           |           |           |           |            |           |            |            |             |