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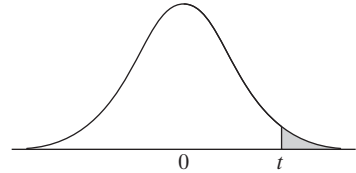
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Critical Values of Student's t Distribution

| df | UPPER TAIL PROBABILITY | | | | | | | | | |
|----------|-------------------------------------|-------|-------|-------|--------|--------|--------|--------|--------|---------|
| | 0.20 | 0.10 | 0.05 | 0.04 | 0.03 | 0.025 | 0.02 | 0.01 | 0.005 | 0.0005 |
| 1 | 1.376 | 3.078 | 6.314 | 7.916 | 10.579 | 12.706 | 15.895 | 31.821 | 63.657 | 636.619 |
| 2 | 1.061 | 1.886 | 2.920 | 3.320 | 3.896 | 4.303 | 4.849 | 6.965 | 9.925 | 31.599 |
| 3 | 0.978 | 1.638 | 2.353 | 2.605 | 2.951 | 3.182 | 3.482 | 4.541 | 5.841 | 12.924 |
| 4 | 0.941 | 1.533 | 2.132 | 2.333 | 2.601 | 2.776 | 2.999 | 3.747 | 4.604 | 8.610 |
| 5 | 0.920 | 1.476 | 2.015 | 2.191 | 2.422 | 2.571 | 2.757 | 3.365 | 4.032 | 6.869 |
| 6 | 0.906 | 1.440 | 1.943 | 2.104 | 2.313 | 2.447 | 2.612 | 3.143 | 3.707 | 5.959 |
| 7 | 0.896 | 1.415 | 1.895 | 2.046 | 2.241 | 2.365 | 2.517 | 2.998 | 3.499 | 5.408 |
| 8 | 0.889 | 1.397 | 1.860 | 2.004 | 2.189 | 2.306 | 2.449 | 2.896 | 3.355 | 5.041 |
| 9 | 0.883 | 1.383 | 1.833 | 1.973 | 2.150 | 2.262 | 2.398 | 2.821 | 3.250 | 4.781 |
| 10 | 0.879 | 1.372 | 1.812 | 1.948 | 2.120 | 2.228 | 2.359 | 2.764 | 3.169 | 4.587 |
| 11 | 0.876 | 1.363 | 1.796 | 1.928 | 2.096 | 2.201 | 2.328 | 2.718 | 3.106 | 4.437 |
| 12 | 0.873 | 1.356 | 1.782 | 1.912 | 2.076 | 2.179 | 2.303 | 2.681 | 3.055 | 4.318 |
| 13 | 0.870 | 1.350 | 1.771 | 1.899 | 2.060 | 2.160 | 2.282 | 2.650 | 3.012 | 4.221 |
| 14 | 0.868 | 1.345 | 1.761 | 1.888 | 2.046 | 2.145 | 2.264 | 2.624 | 2.977 | 4.140 |
| 15 | 0.866 | 1.341 | 1.753 | 1.878 | 2.034 | 2.131 | 2.249 | 2.602 | 2.947 | 4.073 |
| 16 | 0.865 | 1.337 | 1.746 | 1.869 | 2.024 | 2.120 | 2.235 | 2.583 | 2.921 | 4.015 |
| 17 | 0.863 | 1.333 | 1.740 | 1.862 | 2.015 | 2.110 | 2.224 | 2.567 | 2.898 | 3.965 |
| 18 | 0.862 | 1.330 | 1.734 | 1.855 | 2.007 | 2.101 | 2.214 | 2.552 | 2.878 | 3.922 |
| 19 | 0.861 | 1.328 | 1.729 | 1.850 | 2.000 | 2.093 | 2.205 | 2.539 | 2.861 | 3.883 |
| 20 | 0.860 | 1.325 | 1.725 | 1.844 | 1.994 | 2.086 | 2.197 | 2.528 | 2.845 | 3.850 |
| 21 | 0.859 | 1.323 | 1.721 | 1.840 | 1.988 | 2.080 | 2.189 | 2.518 | 2.831 | 3.819 |
| 22 | 0.858 | 1.321 | 1.717 | 1.835 | 1.983 | 2.074 | 2.183 | 2.508 | 2.819 | 3.792 |
| 23 | 0.858 | 1.319 | 1.714 | 1.832 | 1.978 | 2.069 | 2.177 | 2.500 | 2.807 | 3.768 |
| 24 | 0.857 | 1.318 | 1.711 | 1.828 | 1.974 | 2.064 | 2.172 | 2.492 | 2.797 | 3.745 |
| 25 | 0.856 | 1.316 | 1.708 | 1.825 | 1.970 | 2.060 | 2.167 | 2.485 | 2.787 | 3.725 |
| 26 | 0.856 | 1.315 | 1.706 | 1.822 | 1.967 | 2.056 | 2.162 | 2.479 | 2.779 | 3.707 |
| 27 | 0.855 | 1.314 | 1.703 | 1.819 | 1.963 | 2.052 | 2.158 | 2.473 | 2.771 | 3.690 |
| 28 | 0.855 | 1.313 | 1.701 | 1.817 | 1.960 | 2.048 | 2.154 | 2.467 | 2.763 | 3.674 |
| 29 | 0.854 | 1.311 | 1.699 | 1.814 | 1.957 | 2.045 | 2.150 | 2.462 | 2.756 | 3.659 |
| 30 | 0.854 | 1.310 | 1.697 | 1.812 | 1.955 | 2.042 | 2.147 | 2.457 | 2.750 | 3.646 |
| 40 | 0.851 | 1.303 | 1.684 | 1.796 | 1.936 | 2.021 | 2.123 | 2.423 | 2.704 | 3.551 |
| 50 | 0.849 | 1.299 | 1.676 | 1.787 | 1.924 | 2.009 | 2.109 | 2.403 | 2.678 | 3.496 |
| 60 | 0.848 | 1.296 | 1.671 | 1.781 | 1.917 | 2.000 | 2.099 | 2.390 | 2.660 | 3.460 |
| 70 | 0.847 | 1.294 | 1.667 | 1.776 | 1.912 | 1.994 | 2.093 | 2.381 | 2.648 | 3.435 |
| 80 | 0.846 | 1.292 | 1.664 | 1.773 | 1.908 | 1.990 | 2.088 | 2.374 | 2.639 | 3.416 |
| 100 | 0.845 | 1.290 | 1.660 | 1.769 | 1.902 | 1.984 | 2.081 | 2.364 | 2.626 | 3.390 |
| 140 | 0.844 | 1.288 | 1.656 | 1.763 | 1.896 | 1.977 | 2.073 | 2.353 | 2.611 | 3.361 |
| 1000 | 0.842 | 1.282 | 1.646 | 1.752 | 1.883 | 1.962 | 2.056 | 2.330 | 2.581 | 3.300 |
| ∞ | 0.842 | 1.282 | 1.645 | 1.751 | 1.881 | 1.960 | 2.054 | 2.326 | 2.576 | 3.291 |
| | 60% | 80% | 90% | 92% | 94% | 95% | 96% | 98% | 99% | 99.9% |
| | CRITICAL VALUE FOR CONFIDENCE LEVEL | | | | | | | | | |