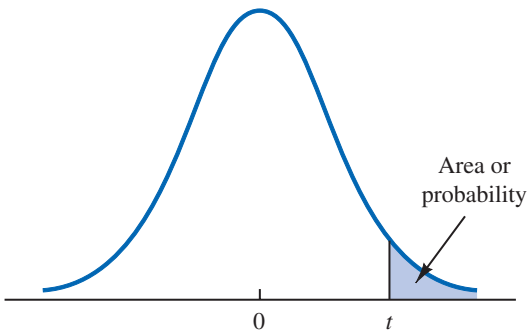


t DISTRIBUTION



Entries in the table give t values for an area or probability in the upper tail of the t distribution. For example, with 10 degrees of freedom and a .05 area in the upper tail, $t_{.05} = 1.812$.

| Degrees of Freedom | Area in Upper Tail | | | | | |
|--------------------|--------------------|-------|-------|--------|--------|--------|
| | .20 | .10 | .05 | .025 | .01 | .005 |
| 1 | 1.376 | 3.078 | 6.314 | 12.706 | 31.821 | 63.656 |
| 2 | 1.061 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 |
| 3 | .978 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 |
| 4 | .941 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 |
| 5 | .920 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 |
| 6 | .906 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 |
| 7 | .896 | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 |
| 8 | .889 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 |
| 9 | .883 | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 |
| 10 | .879 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 |
| 11 | .876 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 |
| 12 | .873 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 |
| 13 | .870 | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 |
| 14 | .868 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 |
| 15 | .866 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 |
| 16 | .865 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 |
| 17 | .863 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 |
| 18 | .862 | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 |
| 19 | .861 | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 |
| 20 | .860 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 |
| 21 | .859 | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 |
| 22 | .858 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 |
| 23 | .858 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 |
| 24 | .857 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 |
| 25 | .856 | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 |
| 26 | .856 | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 |
| 27 | .855 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 |
| 28 | .855 | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 |
| 29 | .854 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 |
| 30 | .854 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 |
| 31 | .853 | 1.309 | 1.696 | 2.040 | 2.453 | 2.744 |
| 32 | .853 | 1.309 | 1.694 | 2.037 | 2.449 | 2.738 |
| 33 | .853 | 1.308 | 1.692 | 2.035 | 2.445 | 2.733 |
| 34 | .852 | 1.307 | 1.691 | 2.032 | 2.441 | 2.728 |

t DISTRIBUTION (*Continued*)

| Degrees of Freedom | Area in Upper Tail | | | | | |
|-----------------------|--------------------|-------|-------|-------|-------|-------|
| | .20 | .10 | .05 | .025 | .01 | .005 |
| 35 | .852 | 1.306 | 1.690 | 2.030 | 2.438 | 2.724 |
| 36 | .852 | 1.306 | 1.688 | 2.028 | 2.434 | 2.719 |
| 37 | .851 | 1.305 | 1.687 | 2.026 | 2.431 | 2.715 |
| 38 | .851 | 1.304 | 1.686 | 2.024 | 2.429 | 2.712 |
| 39 | .851 | 1.304 | 1.685 | 2.023 | 2.426 | 2.708 |
| 40 | .851 | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 |
| 41 | .850 | 1.303 | 1.683 | 2.020 | 2.421 | 2.701 |
| 42 | .850 | 1.302 | 1.682 | 2.018 | 2.418 | 2.698 |
| 43 | .850 | 1.302 | 1.681 | 2.017 | 2.416 | 2.695 |
| 44 | .850 | 1.301 | 1.680 | 2.015 | 2.414 | 2.692 |
| 45 | .850 | 1.301 | 1.679 | 2.014 | 2.412 | 2.690 |
| 46 | .850 | 1.300 | 1.679 | 2.013 | 2.410 | 2.687 |
| 47 | .849 | 1.300 | 1.678 | 2.012 | 2.408 | 2.685 |
| 48 | .849 | 1.299 | 1.677 | 2.011 | 2.407 | 2.682 |
| 49 | .849 | 1.299 | 1.677 | 2.010 | 2.405 | 2.680 |
| 50 | .849 | 1.299 | 1.676 | 2.009 | 2.403 | 2.678 |
| 51 | .849 | 1.298 | 1.675 | 2.008 | 2.402 | 2.676 |
| 52 | .849 | 1.298 | 1.675 | 2.007 | 2.400 | 2.674 |
| 53 | .848 | 1.298 | 1.674 | 2.006 | 2.399 | 2.672 |
| 54 | .848 | 1.297 | 1.674 | 2.005 | 2.397 | 2.670 |
| 55 | .848 | 1.297 | 1.673 | 2.004 | 2.396 | 2.668 |
| 56 | .848 | 1.297 | 1.673 | 2.003 | 2.395 | 2.667 |
| 57 | .848 | 1.297 | 1.672 | 2.002 | 2.394 | 2.665 |
| 58 | .848 | 1.296 | 1.672 | 2.002 | 2.392 | 2.663 |
| 59 | .848 | 1.296 | 1.671 | 2.001 | 2.391 | 2.662 |
| 60 | .848 | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 |
| 61 | .848 | 1.296 | 1.670 | 2.000 | 2.389 | 2.659 |
| 62 | .847 | 1.295 | 1.670 | 1.999 | 2.388 | 2.657 |
| 63 | .847 | 1.295 | 1.669 | 1.998 | 2.387 | 2.656 |
| 64 | .847 | 1.295 | 1.669 | 1.998 | 2.386 | 2.655 |
| 65 | .847 | 1.295 | 1.669 | 1.997 | 2.385 | 2.654 |
| 66 | .847 | 1.295 | 1.668 | 1.997 | 2.384 | 2.652 |
| 67 | .847 | 1.294 | 1.668 | 1.996 | 2.383 | 2.651 |
| 68 | .847 | 1.294 | 1.668 | 1.995 | 2.382 | 2.650 |
| 69 | .847 | 1.294 | 1.667 | 1.995 | 2.382 | 2.649 |
| 70 | .847 | 1.294 | 1.667 | 1.994 | 2.381 | 2.648 |
| 71 | .847 | 1.294 | 1.667 | 1.994 | 2.380 | 2.647 |
| 72 | .847 | 1.293 | 1.666 | 1.993 | 2.379 | 2.646 |
| 73 | .847 | 1.293 | 1.666 | 1.993 | 2.379 | 2.645 |
| 74 | .847 | 1.293 | 1.666 | 1.993 | 2.378 | 2.644 |
| 75 | .846 | 1.293 | 1.665 | 1.992 | 2.377 | 2.643 |
| 76 | .846 | 1.293 | 1.665 | 1.992 | 2.376 | 2.642 |
| 77 | .846 | 1.293 | 1.665 | 1.991 | 2.376 | 2.641 |
| 78 | .846 | 1.292 | 1.665 | 1.991 | 2.375 | 2.640 |
| 79 | .846 | 1.292 | 1.664 | 1.990 | 2.374 | 2.639 |

t DISTRIBUTION (*Continued*)

| Degrees of Freedom | Area in Upper Tail | | | | | |
|-----------------------|--------------------|-------|-------|-------|-------|-------|
| | .20 | .10 | .05 | .025 | .01 | .005 |
| 80 | .846 | 1.292 | 1.664 | 1.990 | 2.374 | 2.639 |
| 81 | .846 | 1.292 | 1.664 | 1.990 | 2.373 | 2.638 |
| 82 | .846 | 1.292 | 1.664 | 1.989 | 2.373 | 2.637 |
| 83 | .846 | 1.292 | 1.663 | 1.989 | 2.372 | 2.636 |
| 84 | .846 | 1.292 | 1.663 | 1.989 | 2.372 | 2.636 |
| 85 | .846 | 1.292 | 1.663 | 1.988 | 2.371 | 2.635 |
| 86 | .846 | 1.291 | 1.663 | 1.988 | 2.370 | 2.634 |
| 87 | .846 | 1.291 | 1.663 | 1.988 | 2.370 | 2.634 |
| 88 | .846 | 1.291 | 1.662 | 1.987 | 2.369 | 2.633 |
| 89 | .846 | 1.291 | 1.662 | 1.987 | 2.369 | 2.632 |
| 90 | .846 | 1.291 | 1.662 | 1.987 | 2.368 | 2.632 |
| 91 | .846 | 1.291 | 1.662 | 1.986 | 2.368 | 2.631 |
| 92 | .846 | 1.291 | 1.662 | 1.986 | 2.368 | 2.630 |
| 93 | .846 | 1.291 | 1.661 | 1.986 | 2.367 | 2.630 |
| 94 | .845 | 1.291 | 1.661 | 1.986 | 2.367 | 2.629 |
| 95 | .845 | 1.291 | 1.661 | 1.985 | 2.366 | 2.629 |
| 96 | .845 | 1.290 | 1.661 | 1.985 | 2.366 | 2.628 |
| 97 | .845 | 1.290 | 1.661 | 1.985 | 2.365 | 2.627 |
| 98 | .845 | 1.290 | 1.661 | 1.984 | 2.365 | 2.627 |
| 99 | .845 | 1.290 | 1.660 | 1.984 | 2.364 | 2.626 |
| 100 | .845 | 1.290 | 1.660 | 1.984 | 2.364 | 2.626 |
| ∞ | .842 | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 |