**Quantiles of the Student’s t-Distribution.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | | | | | | | | | | | | | | | |
| **0.0005** | **0.001** | **0.005** | **0.01** | **0.025** | **0.05** | **0.1** | **0.2** | **0.6** | **0.8** | **0.9** | **0.95** | **0.975** | **0.99** | **0.995** | **0.999** | **0.9995** |
| **1** | -636.619 | -318.309 | -63.657 | -31.821 | -12.706 | -6.314 | -3.078 | -1.376 | 0.325 | 1.376 | 3.078 | 6.314 | 12.706 | 31.821 | 63.657 | 318.309 | 636.619 |
| **2** | -31.599 | -22.327 | -9.925 | -6.965 | -4.303 | -2.920 | -1.886 | -1.061 | 0.289 | 1.061 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 | 22.327 | 31.599 |
| **3** | -12.924 | -10.215 | -5.841 | -4.541 | -3.182 | -2.353 | -1.638 | -0.978 | 0.277 | 0.978 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 | 10.215 | 12.924 |
| **4** | -8.610 | -7.173 | -4.604 | -3.747 | -2.776 | -2.132 | -1.533 | -0.941 | 0.271 | 0.941 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 | 7.173 | 8.610 |
| **5** | -6.869 | -5.893 | -4.032 | -3.365 | -2.571 | -2.015 | -1.476 | -0.920 | 0.267 | 0.920 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 | 5.893 | 6.869 |
| **6** | -5.959 | -5.208 | -3.707 | -3.143 | -2.447 | -1.943 | -1.440 | -0.906 | 0.265 | 0.906 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 | 5.208 | 5.959 |
| **7** | -5.408 | -4.785 | -3.499 | -2.998 | -2.365 | -1.895 | -1.415 | -0.896 | 0.263 | 0.896 | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 | 4.785 | 5.408 |
| **8** | -5.041 | -4.501 | -3.355 | -2.896 | -2.306 | -1.860 | -1.397 | -0.889 | 0.262 | 0.889 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 | 4.501 | 5.041 |
| **9** | -4.781 | -4.297 | -3.250 | -2.821 | -2.262 | -1.833 | -1.383 | -0.883 | 0.261 | 0.883 | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 | 4.297 | 4.781 |
| **10** | -4.587 | -4.144 | -3.169 | -2.764 | -2.228 | -1.812 | -1.372 | -0.879 | 0.260 | 0.879 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 | 4.144 | 4.587 |
|  |  | | | | | | | | | | | | | | | | |
| **0.0005** | **0.001** | **0.005** | **0.01** | **0.025** | **0.05** | **0.1** | **0.2** | **0.6** | **0.8** | **0.9** | **0.95** | **0.975** | **0.99** | **0.995** | **0.999** | **0.9995** |
| **11** | -4.437 | -4.025 | -3.106 | -2.718 | -2.201 | -1.796 | -1.363 | -0.876 | 0.260 | 0.876 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 | 4.025 | 4.437 |
| **12** | -4.318 | -3.930 | -3.055 | -2.681 | -2.179 | -1.782 | -1.356 | -0.873 | 0.259 | 0.873 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 | 3.930 | 4.318 |
| **13** | -4.221 | -3.852 | -3.012 | -2.650 | -2.160 | -1.771 | -1.350 | -0.870 | 0.259 | 0.870 | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 | 3.852 | 4.221 |
| **14** | -4.140 | -3.787 | -2.977 | -2.624 | -2.145 | -1.761 | -1.345 | -0.868 | 0.258 | 0.868 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 | 3.787 | 4.140 |
| **15** | -4.073 | -3.733 | -2.947 | -2.602 | -2.131 | -1.753 | -1.341 | -0.866 | 0.258 | 0.866 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 | 3.733 | 4.073 |
| **16** | -4.015 | -3.686 | -2.921 | -2.583 | -2.120 | -1.746 | -1.337 | -0.865 | 0.258 | 0.865 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 | 3.686 | 4.015 |
| **17** | -3.965 | -3.646 | -2.898 | -2.567 | -2.110 | -1.740 | -1.333 | -0.863 | 0.257 | 0.863 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 | 3.646 | 3.965 |
| **18** | -3.922 | -3.610 | -2.878 | -2.552 | -2.101 | -1.734 | -1.330 | -0.862 | 0.257 | 0.862 | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 | 3.610 | 3.922 |
| **19** | -3.883 | -3.579 | -2.861 | -2.539 | -2.093 | -1.729 | -1.328 | -0.861 | 0.257 | 0.861 | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 | 3.579 | 3.883 |
| **20** | -3.850 | -3.552 | -2.845 | -2.528 | -2.086 | -1.725 | -1.325 | -0.860 | 0.257 | 0.860 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 | 3.552 | 3.850 |
| **21** | -3.819 | -3.527 | -2.831 | -2.518 | -2.080 | -1.721 | -1.323 | -0.859 | 0.257 | 0.859 | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 | 3.527 | 3.819 |
| **22** | -3.792 | -3.505 | -2.819 | -2.508 | -2.074 | -1.717 | -1.321 | -0.858 | 0.256 | 0.858 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 | 3.505 | 3.792 |
| **23** | -3.768 | -3.485 | -2.807 | -2.500 | -2.069 | -1.714 | -1.319 | -0.858 | 0.256 | 0.858 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 | 3.485 | 3.768 |
|  |  | | | | | | | | | | | | | | | | |
| **0.0005** | **0.001** | **0.005** | **0.01** | **0.025** | **0.05** | **0.1** | **0.2** | **0.6** | **0.8** | **0.9** | **0.95** | **0.975** | **0.99** | **0.995** | **0.999** | **0.9995** |
| **24** | -3.745 | -3.467 | -2.797 | -2.492 | -2.064 | -1.711 | -1.318 | -0.857 | 0.256 | 0.857 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 | 3.467 | 3.745 |
| **25** | -3.725 | -3.450 | -2.787 | -2.485 | -2.060 | -1.708 | -1.316 | -0.856 | 0.256 | 0.856 | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 | 3.450 | 3.725 |
| **26** | -3.707 | -3.435 | -2.779 | -2.479 | -2.056 | -1.706 | -1.315 | -0.856 | 0.256 | 0.856 | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 | 3.435 | 3.707 |
| **27** | -3.690 | -3.421 | -2.771 | -2.473 | -2.052 | -1.703 | -1.314 | -0.855 | 0.256 | 0.855 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 | 3.421 | 3.690 |
| **28** | -3.674 | -3.408 | -2.763 | -2.467 | -2.048 | -1.701 | -1.313 | -0.855 | 0.256 | 0.855 | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 | 3.408 | 3.674 |
| **29** | -3.659 | -3.396 | -2.756 | -2.462 | -2.045 | -1.699 | -1.311 | -0.854 | 0.256 | 0.854 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 | 3.396 | 3.659 |
| **30** | -3.646 | -3.385 | -2.750 | -2.457 | -2.042 | -1.697 | -1.310 | -0.854 | 0.256 | 0.854 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 | 3.385 | 3.646 |
| **35** | -3.591 | -3.340 | -2.724 | -2.438 | -2.030 | -1.690 | -1.306 | -0.852 | 0.255 | 0.852 | 1.306 | 1.690 | 2.030 | 2.438 | 2.724 | 3.340 | 3.591 |
| **40** | -3.551 | -3.307 | -2.704 | -2.423 | -2.021 | -1.684 | -1.303 | -0.851 | 0.255 | 0.851 | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 | 3.307 | 3.551 |
| **45** | -3.520 | -3.281 | -2.690 | -2.412 | -2.014 | -1.679 | -1.301 | -0.850 | 0.255 | 0.850 | 1.301 | 1.679 | 2.014 | 2.412 | 2.690 | 3.281 | 3.520 |
| **50** | -3.496 | -3.261 | -2.678 | -2.403 | -2.009 | -1.676 | -1.299 | -0.849 | 0.255 | 0.849 | 1.299 | 1.676 | 2.009 | 2.403 | 2.678 | 3.261 | 3.496 |
| **60** | -3.460 | -3.232 | -2.660 | -2.390 | -2.000 | -1.671 | -1.296 | -0.848 | 0.254 | 0.848 | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 | 3.232 | 3.460 |
| **70** | -3.435 | -3.211 | -2.648 | -2.381 | -1.994 | -1.667 | -1.294 | -0.847 | 0.254 | 0.847 | 1.294 | 1.667 | 1.994 | 2.381 | 2.648 | 3.211 | 3.435 |
|  |  | | | | | | | | | | | | | | | | |
| **0.0005** | **0.001** | **0.005** | **0.01** | **0.025** | **0.05** | **0.1** | **0.2** | **0.6** | **0.8** | **0.9** | **0.95** | **0.975** | **0.99** | **0.995** | **0.999** | **0.9995** |
| **80** | -3.416 | -3.195 | -2.639 | -2.374 | -1.990 | -1.664 | -1.292 | -0.846 | 0.254 | 0.846 | 1.292 | 1.664 | 1.990 | 2.374 | 2.639 | 3.195 | 3.416 |
| **90** | -3.402 | -3.183 | -2.632 | -2.368 | -1.987 | -1.662 | -1.291 | -0.846 | 0.254 | 0.846 | 1.291 | 1.662 | 1.987 | 2.368 | 2.632 | 3.183 | 3.402 |
| **100** | -3.390 | -3.174 | -2.626 | -2.364 | -1.984 | -1.660 | -1.290 | -0.845 | 0.254 | 0.845 | 1.290 | 1.660 | 1.984 | 2.364 | 2.626 | 3.174 | 3.390 |
| **200** | -3.340 | -3.131 | -2.601 | -2.345 | -1.972 | -1.653 | -1.286 | -0.843 | 0.254 | 0.843 | 1.286 | 1.653 | 1.972 | 2.345 | 2.601 | 3.131 | 3.340 |
| **500** | -3.310 | -3.107 | -2.586 | -2.334 | -1.965 | -1.648 | -1.283 | -0.842 | 0.253 | 0.842 | 1.283 | 1.648 | 1.965 | 2.334 | 2.586 | 3.107 | 3.310 |
| **1000** | -3.300 | -3.098 | -2.581 | -2.330 | -1.962 | -1.646 | -1.282 | -0.842 | 0.253 | 0.842 | 1.282 | 1.646 | 1.962 | 2.330 | 2.581 | 3.098 | 3.300 |
| **∞** | -3.291 | -3.090 | -2.576 | -2.326 | -1.960 | -1.645 | -1.282 | -0.842 | 0.253 | 0.842 | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 | 3.090 | 3.291 |