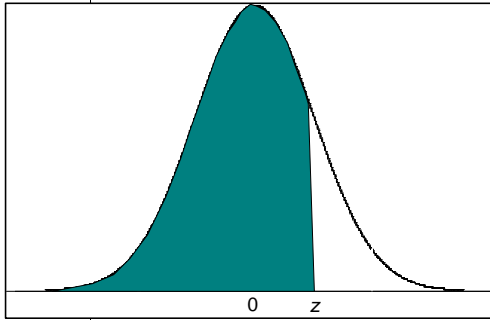


## Cumulative Probabilities for the Standard Normal (Z) Distribution



Values in the table correspond to the area under the curve of a standard normal random variable for a value at or below  $z$ .

| <b>z</b>   | <b>0.00</b> | <b>0.01</b> | <b>0.02</b> | <b>0.03</b> | <b>0.04</b> | <b>0.05</b> | <b>0.06</b> | <b>0.07</b> | <b>0.08</b> | <b>0.09</b> |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>0.0</b> | 0.5000      | 0.5040      | 0.5080      | 0.5120      | 0.5160      | 0.5199      | 0.5239      | 0.5279      | 0.5319      | 0.5359      |
| <b>0.1</b> | 0.5398      | 0.5438      | 0.5478      | 0.5517      | 0.5557      | 0.5596      | 0.5636      | 0.5675      | 0.5714      | 0.5753      |
| <b>0.2</b> | 0.5793      | 0.5832      | 0.5871      | 0.5910      | 0.5948      | 0.5987      | 0.6026      | 0.6064      | 0.6103      | 0.6141      |
| <b>0.3</b> | 0.6179      | 0.6217      | 0.6255      | 0.6293      | 0.6331      | 0.6368      | 0.6406      | 0.6443      | 0.6480      | 0.6517      |
| <b>0.4</b> | 0.6554      | 0.6591      | 0.6628      | 0.6664      | 0.6700      | 0.6736      | 0.6772      | 0.6808      | 0.6844      | 0.6879      |
| <b>0.5</b> | 0.6915      | 0.6950      | 0.6985      | 0.7019      | 0.7054      | 0.7088      | 0.7123      | 0.7157      | 0.7190      | 0.7224      |
| <b>0.6</b> | 0.7257      | 0.7291      | 0.7324      | 0.7357      | 0.7389      | 0.7422      | 0.7454      | 0.7486      | 0.7517      | 0.7549      |
| <b>0.7</b> | 0.7580      | 0.7611      | 0.7642      | 0.7673      | 0.7704      | 0.7734      | 0.7764      | 0.7794      | 0.7823      | 0.7852      |
| <b>0.8</b> | 0.7881      | 0.7910      | 0.7939      | 0.7967      | 0.7995      | 0.8023      | 0.8051      | 0.8078      | 0.8106      | 0.8133      |
| <b>0.9</b> | 0.8159      | 0.8186      | 0.8212      | 0.8238      | 0.8264      | 0.8289      | 0.8315      | 0.8340      | 0.8365      | 0.8389      |
| <b>1.0</b> | 0.8413      | 0.8438      | 0.8461      | 0.8485      | 0.8508      | 0.8531      | 0.8554      | 0.8577      | 0.8599      | 0.8621      |
| <b>1.1</b> | 0.8643      | 0.8665      | 0.8686      | 0.8708      | 0.8729      | 0.8749      | 0.8770      | 0.8790      | 0.8810      | 0.8830      |
| <b>1.2</b> | 0.8849      | 0.8869      | 0.8888      | 0.8907      | 0.8925      | 0.8944      | 0.8962      | 0.8980      | 0.8997      | 0.9015      |
| <b>1.3</b> | 0.9032      | 0.9049      | 0.9066      | 0.9082      | 0.9099      | 0.9115      | 0.9131      | 0.9147      | 0.9162      | 0.9177      |
| <b>1.4</b> | 0.9192      | 0.9207      | 0.9222      | 0.9236      | 0.9251      | 0.9265      | 0.9279      | 0.9292      | 0.9306      | 0.9319      |
| <b>1.5</b> | 0.9332      | 0.9345      | 0.9357      | 0.9370      | 0.9382      | 0.9394      | 0.9406      | 0.9418      | 0.9429      | 0.9441      |
| <b>1.6</b> | 0.9452      | 0.9463      | 0.9474      | 0.9484      | 0.9495      | 0.9505      | 0.9515      | 0.9525      | 0.9535      | 0.9545      |
| <b>1.7</b> | 0.9554      | 0.9564      | 0.9573      | 0.9582      | 0.9591      | 0.9599      | 0.9608      | 0.9616      | 0.9625      | 0.9633      |
| <b>1.8</b> | 0.9641      | 0.9649      | 0.9656      | 0.9664      | 0.9671      | 0.9678      | 0.9686      | 0.9693      | 0.9699      | 0.9706      |
| <b>1.9</b> | 0.9713      | 0.9719      | 0.9726      | 0.9732      | 0.9738      | 0.9744      | 0.9750      | 0.9756      | 0.9761      | 0.9767      |
| <b>2.0</b> | 0.9772      | 0.9778      | 0.9783      | 0.9788      | 0.9793      | 0.9798      | 0.9803      | 0.9808      | 0.9812      | 0.9817      |
| <b>2.1</b> | 0.9821      | 0.9826      | 0.9830      | 0.9834      | 0.9838      | 0.9842      | 0.9846      | 0.9850      | 0.9854      | 0.9857      |
| <b>2.2</b> | 0.9861      | 0.9864      | 0.9868      | 0.9871      | 0.9875      | 0.9878      | 0.9881      | 0.9884      | 0.9887      | 0.9890      |
| <b>2.3</b> | 0.9893      | 0.9896      | 0.9898      | 0.9901      | 0.9904      | 0.9906      | 0.9909      | 0.9911      | 0.9913      | 0.9916      |
| <b>2.4</b> | 0.9918      | 0.9920      | 0.9922      | 0.9925      | 0.9927      | 0.9929      | 0.9931      | 0.9932      | 0.9934      | 0.9936      |
| <b>2.5</b> | 0.9938      | 0.9940      | 0.9941      | 0.9943      | 0.9945      | 0.9946      | 0.9948      | 0.9949      | 0.9951      | 0.9952      |
| <b>2.6</b> | 0.9953      | 0.9955      | 0.9956      | 0.9957      | 0.9959      | 0.9960      | 0.9961      | 0.9962      | 0.9963      | 0.9964      |
| <b>2.7</b> | 0.9965      | 0.9966      | 0.9967      | 0.9968      | 0.9969      | 0.9970      | 0.9971      | 0.9972      | 0.9973      | 0.9974      |
| <b>2.8</b> | 0.9974      | 0.9975      | 0.9976      | 0.9977      | 0.9977      | 0.9978      | 0.9979      | 0.9979      | 0.9980      | 0.9981      |
| <b>2.9</b> | 0.9981      | 0.9982      | 0.9982      | 0.9983      | 0.9984      | 0.9984      | 0.9985      | 0.9985      | 0.9986      | 0.9986      |
| <b>3.0</b> | 0.9987      | 0.9987      | 0.9987      | 0.9988      | 0.9988      | 0.9989      | 0.9989      | 0.9989      | 0.9990      | 0.9990      |
| <b>3.1</b> | 0.9990      | 0.9991      | 0.9991      | 0.9991      | 0.9992      | 0.9992      | 0.9992      | 0.9992      | 0.9993      | 0.9993      |
| <b>3.2</b> | 0.9993      | 0.9993      | 0.9994      | 0.9994      | 0.9994      | 0.9994      | 0.9994      | 0.9995      | 0.9995      | 0.9995      |
| <b>3.3</b> | 0.9995      | 0.9995      | 0.9995      | 0.9996      | 0.9996      | 0.9996      | 0.9996      | 0.9996      | 0.9996      | 0.9997      |
| <b>3.4</b> | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9997      | 0.9998      |
| <b>3.5</b> | 0.9998      |             |             |             |             |             |             |             |             |             |
| <b>4.0</b> | 0.99997     |             |             |             |             |             |             |             |             |             |
| <b>4.5</b> | 0.999997    |             |             |             |             |             |             |             |             |             |
| <b>5.0</b> | 0.9999997   |             |             |             |             |             |             |             |             |             |