General pointers on normal table lookups

The table is used in 2 different ways, depending on the problem you want to solve:

(1) Given a z-score, lookup what proportion of the distribution is to the left.

(2) Given a proportion of the distribution (measured from the left), lookup the z-score where it occurs.

It helps to keep the following in mind:

* The table expresses all proportions as fractions (not %).

* The total proportion of everything under the normal curve is 1.0 (i.e., 100%).

* Proportion to the right of a z-score = 1.0 - proportion to the left.

* The normal curve is perfectly symmetric, and centered at 0. You can exploit this knowledge & take many short-cuts. E.g., Proportion to the right of z=1.2 is same as proportion to the left of z=-1.2.

* Another helpful use of symmetry: If a z-score is negative, the proportion must be below 0.5. If a z-score is positive, the proportion must be larger than 0.5.

Basic table layout:

* This table accepts z-scores with 2 decimals, and expresses proportions using 4 decimals.

* The bulk of the "interior" of the table consists of 4-digit values that are proportions.

* The vertical column at the ends of the table shows z-scores upto the first decimal place. The top row of the table shows the 2nd decimal place.

Example:

* Find the % of the normal distribution that is below z=1.26.

* Method: First, find the row with z=1.2. Then move horizontally to the column that reads 0.06 in the top row. The 4-digit number in that position is 0.8962. Answer: 89.62% of the normal distribution lies below z=1.26.

Example:

* Find the z-score where 34% of the normal distribution is to the left.

* Method: Start in the interior of the table and look for the 4-digit number closest to 0.34. Once you find this, read the z-score at that position. Answer: The closest value to 0.34 is 0.3409, so the required z-score is -0.41.