Textbook Activity
Day 5

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These questions will be completed by the student and will count as class time. The students will be responsible for completing the work related to these activities and this work will count as attendance.

This work is due first thing during class on Day 6. Failure to turn in this work will cause you to be 2 hours out without an excuse.

Directions:
Read Chapter 5 of EYCLS, page 73

Please use the lecture slides, the NDT table, and your textbook to answer the following questions:

1. Describe, in your own words, how to use the Standard Normal Table to find the probability related to a specific *z-score*.

YOU SPLIT THE Z-SCORE INTO TWO NUMBERS BASED ON THE TENTH AND HUNDRETH PLACES (0.43 = 0.4 AND 0.03). YOU THEN USE THESE NUMBERS TO CROSS REFERENCE THE CHART FOR THE PROBABILITY.

2. Describe, in our own words, how to use the Standard Normal Table to find the *z-score* related to a specific probability.

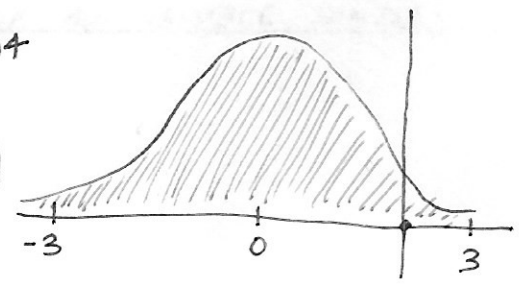
FIND THE PROBABILITY ON THE SNT AND LOOK AT WHAT TWO NUMBERS IT CORRELATES WITH. ADD THE TWO NUMBERS TOGETHER FOR THE ZSCORE.

3. Draw a diagram that shows the area of the curve that each of the following z-scores has and write its corresponding area.
   a. z = 2.34

2.3 0.04

0.9904

99.04%

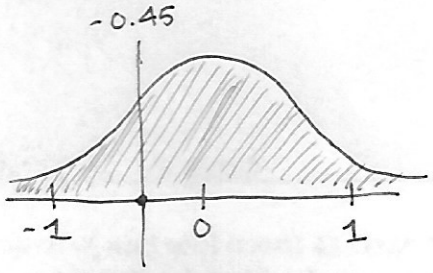


b. $z = -0.45$

-0.4 0.05

0.3264

32.64%

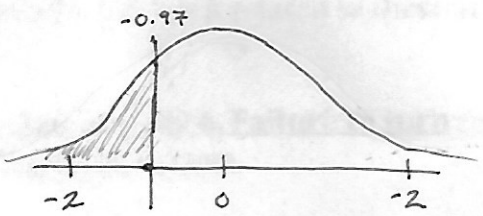


c. $z < -0.97$

-0.9 0.07

0.1660

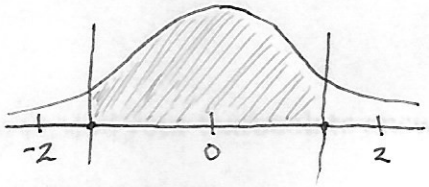
16.60%



d. $-1.40 < z < 1.40$

0.0808 0.9192

0.8384 → 83.84%



4. List the criteria that normal distributions have to meet.

a. BELL-SHAPED AND SYMMETRICAL

b. MEAN, MEDIAN, + MODE ARE THE SAME

c. TOTAL AREA UNDER CURVE EQUALS 1

5. Explain, in your own words, what a sampling distribution is.

THE PROBABILITY DISTRIBUTION OF A SAMPLE STATISTIC FOR ALL POSSIBLE SAMPLES OF A GIVEN SIZE n FOR A GIVEN POPULATION.

6. Explain, in your own words, what the Central Limit Theorem is.

THE SAMPLING DISTRIBUTION OF THE MEAN CAN BE APPROXIMATED BY THE NORMAL DISTRIBUTION WHEN THE SAMPLE SIZE OF ALL POSSIBLE SAMPLES LARGE ENOUGH.