

Normal Distribution Practice problems (6C)

Some of these problems require that you use the z-table found in your book. Others should be solved by using the empirical rule (68%-95%-99.7%). Note that anytime the z score is -3 , -2 , -1 , 1 , 2 , or 3 you can use the empirical rule.

Suppose you have a normal distribution with a mean of 120 and a standard deviation of 15.

- 1) Find the percent of the data that are at or below 135.
- 2) Find the percent of the data that are below 90.
- 3) Find the percent of values that are between 75 and 165.
- 4) Find the z-score for a value of 95.
- 5) Find the percent of values at or below 132.
- 6) Find the percent of values above 145.
- 7) Find the percent of values between 80 and 129.
- 8) What is the percentile for a score of 100?
- 9) Suppose there were 500 values in the data set. How many of the values were 85.5 or below?

Answers:

- 1) 84%
- 2) 2.5%
- 3) 99.7%
- 4) -1.7
- 5) 78.81%
- 6) 4.46%
- 7) 72.22%
- 8) 9.68%
- 9) about 5