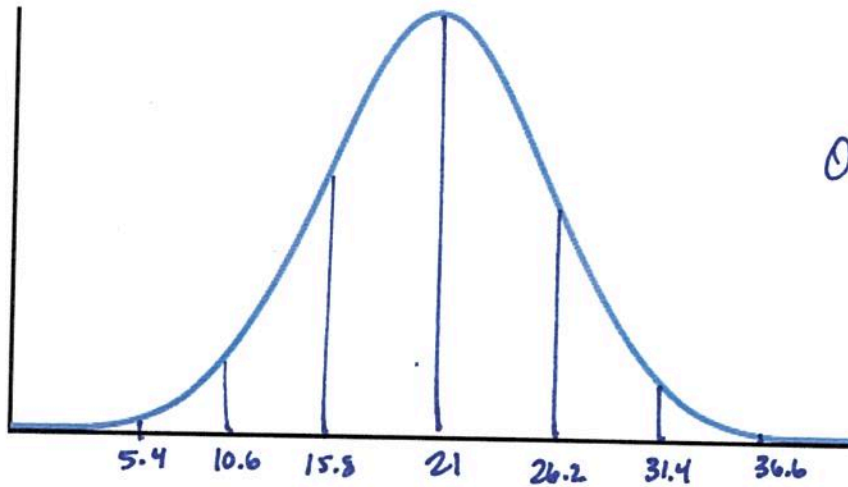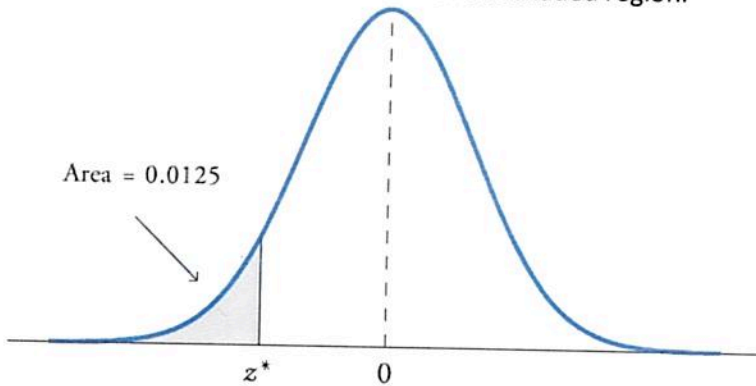Instructions: Show all work (that work can be in the form of a spreadsheet submitted along with the quiz or done by hand on paper; if you use your calculator, say what functions you used). Report answers to the standard number of decimal places, or to the number requested in the problem. Be sure to answer all parts of the questions, including requests for interpretation and explanations. Be as thorough as possible.

1. The mean ACT score is 21 with a standard deviation of 5.2. Plot this information on the normal distribution below, plotting three standard deviations on each side of the mean. Find the probability of obtaining a score of 30 or higher.

0.041746

5.4   10.6   15.8   21   26.2   31.4   36.6

2. Find the z-scores of the boundaries of the shaded region.

Area = 0.0125

z^* 0

$z^* = -2.2414$