

Problems 6 – 7

1. Draw a normal curve & shade the appropriate area
2. Convert "actual scores" to "z-scores" (*Now you can use the table*)
3. Use the table to find the area(s) under the curve
4. Convert to a percentage

6) The diameters of bolts produced by a certain machine are normally distributed with a mean of 0.30 inches and a standard deviation of 0.01 inches. What percentage of bolts will have a diameter greater than 0.32 inches?

7) The lengths of human pregnancies are normally distributed with a mean of 268 days and a standard deviation of 15 days. What percentage of pregnancies will last less than 250 days or more than 280 days – making them high risk pregnancies?

Problems 8 – 9

1. Draw a normal curve & shade the appropriate area
2. Convert "actual scores" to "z-scores" (*Now you can use the table*)
3. Use the table to find the area(s) under the curve
4. Convert to a percentage

As part of a study, 800 college football players are randomly chosen and their weights taken. The distribution of the weights is approximately normal. The average weight is 235 pounds and the standard deviation is 25 pounds.

8) Of the 800 players approximately how many weighed 210 pounds or less?

9) Approximately how many players weighed over 252 pounds?

Problem 10

1. Draw a normal curve & shade the appropriate area
2. Mark the area under based upon what is given in the problem
3. Use the table to find the z-score of the area(s) under the curve
4. Convert "z-score" back to an "actual score"

10) At a local market, the average weekly grocery bill is \$57.85 with a standard deviation of \$14.25. What is the lowest amount spent by the upper 20% of market customers?