Time Frame: 50 minutes

Subject Matter: Test in Applications of the Normal Distribution TELL ME

Objective: TSWBAT find the probabilities for a normally distributed variable by transforming it into a standard normal variable

Standards: DA – 4.8

 Materials: Quiz Papers, Table E, and Calculators

SHOW ME

Quiz

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. The average salary for a Queens College full professor is $85,900. If the average salary is normally distributed with a standard deviation of $11,000, find these probabilities.
2. The professor makes more than $90,000.
3. The professor makes more than $75,000.

*Source: AAUP/Chronicle of Higher Education*

1. Full-time PH.D. students receive an average of $12,837 per year. If the average salaries are normally distributed with a standard deviation of $1,500, find these probabilities.
2. The student makes more than $15,000.
3. The student makes between $13,000 and $14,000.

*Source: U.S. Education Dept./Chronicle of Higher Education*

1. The average time for a courier to travel from Pittsburgh to Harrisburg is 200 minutes, and the standard deviation is 10 minutes. If one of these trips is selected in random, find the probability that a courier will have the following travel time. Assume the variable is normally distributed.
2. At least 180 minutes. (180 minutes or more)
3. At most 205 minutes. (205 minutes or less)