Time Frame: 50 minutes

Subject Matter: Probability, Mean, Variance, & SD of Binomial Distribution

TELL ME

Objective: TSWBAT solve every problem in the test with at least 90% accuracy.

Standards: DA – 5.6

Materials: Test paper and calculator

SHOW ME

**Test**

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

1. Compute the probability of *X* successes, using the binomial formula. Make sure to show your work.
2. *n* = 12, *X* = 10, *p* = 0.30
3. *n* = 8, *X* = 5, *p* = O. 18
4. Solve the following problems. Make sure to show your work.
5. It was found that 60% of American victims of health care fraud are senior citizens. If 30 victims are randomly selected, find the probability that exactly 21 are senior citizens.

Source: *100% American* by Daniel Evan Weiss.

1. If 25% of the people in a community use the emergency room at a hospital in one year, find these probabilities for a sample of 8 people.
2. At most three used the emergency room.
3. Exactly three used the emergency room.
4. In-a restaurant, a study found that 48% of all patrons smoked. If the seating capacity of the restaurant is 80 people, find the mean, variance, and standard deviation of the number of smokers. About how many seats should be available for smoking customers?