**Questions**

1. Scores on a particular test are normally distributed with a standard deviation of 4 and a mean of 30. What is the probability of anyone scoring less than 40?

2. Annual salaries for a large company are approximately normally distributed with a mean of $50,000 and a of $20,000. What percentage of company workers may under $40,000?

3. IQ scores have a normal distribution with a mean of 100 and a standard deviation of 15. What percent of people have an IQ above 120?

4. The amount of time a student taking statistics spends on studying for a test is normally distributed. If the average time spent studying is 12 hours and the standard deviation is 4 hours, what is the probability that a student will spend more than 8 hours studying?

5. The amount of candy dispensed by a candy machine is normally distributed with a mean of 0.9 oz and a standard deviation of 0.1 ounces. If the machine is used 500 times, how many times will it dispense more than 1 oz of candy?

**ANSWERS**

1. z = 2.5.

P(X<40) = 9.38%

1. z = -0.5

P(X<0.5) = 30.85%

1. z = 1.33

P(X>120) = 1 - P(X<40) = 9.18%

1. z = -1

P(X>8) = 1 - P(X<40) = 84.13%

1. z = 1

P(X>1) = 1 - P(X<40) = 15.87%

15.87% of 500 = 79.25 oz