ISAT Prep - Target P - Assignment Name_____


# Normal Distributions

**Intelligence quotients (IQs) on the Standford-Binet intelligence test are normally distributed with a mean of 100 and a standard deviation of 16.**

1) Which value is greater?
   A) The mean IQ of IQs within 1 standard deviation of the mean.
   B) The mean IQ of all IQs
   C) Neither. Both values are the same.

2) Which value is greater?
   A) The number of people with IQs between 84 and 100.
   B) The number of people with IQs between 68 and 84.
   C) Neither. Both values are equal.

3) Which value is greater?
   A) The number of people with IQs between 100 and 116.
   B) The number of people with IQs between 116 and 132.
   C) Neither. Both values are equal.

4) Which value is greater?
   A) The number of people with IQs between 84 and 116.
   B) The number of people with IQs greater than 100.
   C) Neither. Both values are equal.

5) Which value is greater?
   A) The number of people with IQs within 1 standard deviation of the mean.
   B) The number of people with IQs less than 100.
   C) Neither. Both values are equal.

**Not everyone pays the same price for the same model of a car. Purchases of a particular new car model are normally distributed with a mean of $17,000 and standard deviation of $500.**

6) Find the percentage of buyers who paid between $16,500 and $17,500.

7) Find the percentage of buyers who paid between $16,000 and $18,000.

8) Find the percentage of buyers who paid between $17,000 and $17,500.

9) Find the percentage of buyers who paid between $17,000 and $18,000.

10) Find the percentage of buyers who paid between $16,000 and $17,000.

11) Find the percentage of buyers who paid between $16,500 and $17,000.

12) Find the percentage of buyers who paid between $15,500 and $17,000.

13) Find the percentage of buyers who paid between $17,000 and $18,500.

14) Find the percentage of buyers who paid more than $17,500.

15) Find the percentage of buyers who paid more than $18,000.

16) Find the percentage of buyers who paid less than $16,000.

17) Find the percentage of buyers who paid less than $16,500.