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1. It is possible for the standard deviation to be less than zero.	TRUE or FALSE

For Questions 2-4, consider the following data sets. Note that you should NOT need to use formulas to answer these questions.
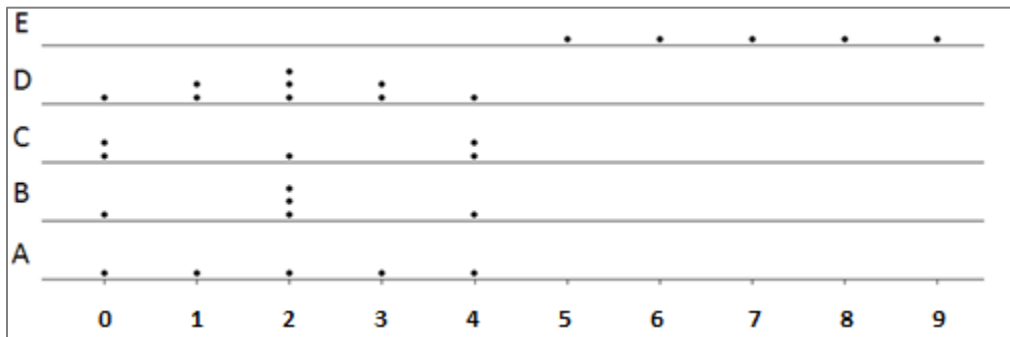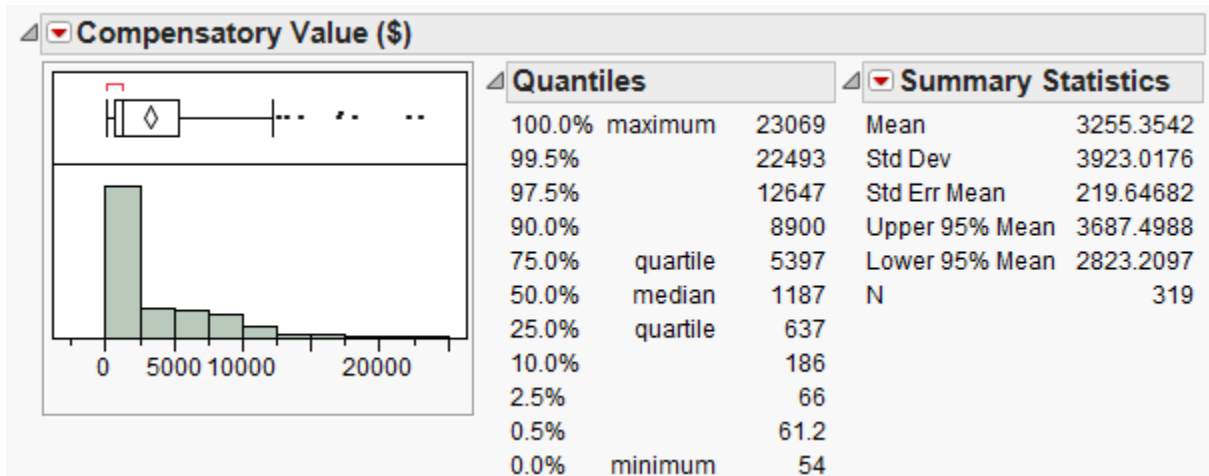

2. Circle the most correct answer below.

    a. The range of data set E is the largest since it consists of the highest values.

    b. The range of all data sets is the same.

    c. The range of data set C is largest since it has two values at its minimum and two values at its maximum.

    d. None of the above is a correct statement.

3. Circle the most correct answer below.

    a. The standard deviations of data sets B and D are the same.

    b. The standard deviations of data sets B and C are the same.

    c. The standard deviations of data sets A and E are the same.

    d. None of the above is a correct statement.

4. Circle the most correct answer below.

    a. Data set B has a larger standard deviation that Data Set A.

    b. Data set B has a larger standard deviation than Data Set C.

    c. Data set A has a larger standard deviation than Data Set C.

   d. None of the above is a correct statement.

5. Suppose the average score on an exam is 78 with a standard deviation of 5. If the professor realizes that a question was unfair and decides to give every student three points back (i.e., each score is increased by 3 points), what are the new mean and standard deviation?

   a. mean = 78, standard deviation = 5
   b. mean = 78, standard deviation = 8
   c. mean = 81, standard deviation = 5
   d. mean = 81, standard deviation = 8

6. Consider the following JMP output which summarizes the distribution of Compensatory Value for a random sample of trees in New York City.

Compensatory Value ($)

Quantiles		
100.0%	maximum	23069
99.5%		22493
97.5%		12647
90.0%		8900
75.0%	quartile	5397
50.0%	median	1187
25.0%	quartile	637
10.0%		186
2.5%		66
0.5%		61.2
0.0%	minimum	54

Summary Statistics	
Mean	3255.3542
Std Dev	3923.0176
Std Err Mean	219.64682
Upper 95% Mean	3687.4988
Lower 95% Mean	2823.2097
N	319

Use the JMP output to fill in the boxes to correctly complete this statement.

Approximately [   ] of the trees were worth $640 or less, and 50% of the trees

were worth [   ] dollars or less. [   ] of the trees were worth

more than $8900.

7. The following graph shows the CDF plots for county-level Typical Household Incomes compared across three states: Arkansas (AR), Georgia (GA), and Connecticut (CT).

CDF Plot
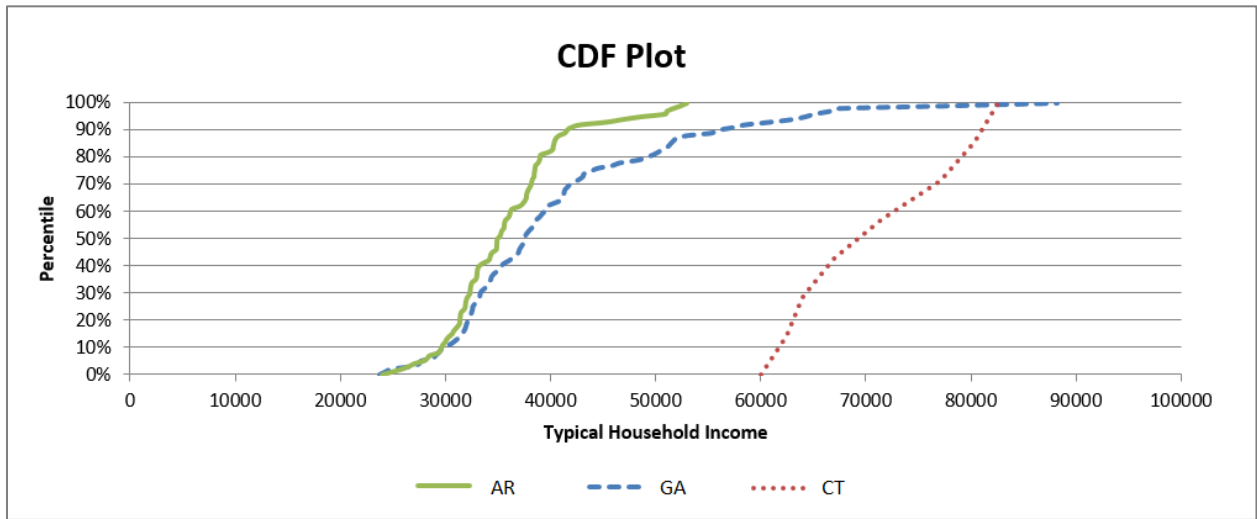
Answer the following questions based on this graph.

a. What is the median county-level typical household income in Connecticut?

b. About 90% of the counties in Arkansas have a typical household income level at or below what dollar amount?

Answer the following true/false questions based on this graph.

c. Of these three states, Georgia appears to have the most amount of variability in county-level typical household incomes.	TRUE FALSE
d. All counties in Arkansas have lower typical household incomes than all counties in Connecticut.	TRUE FALSE