

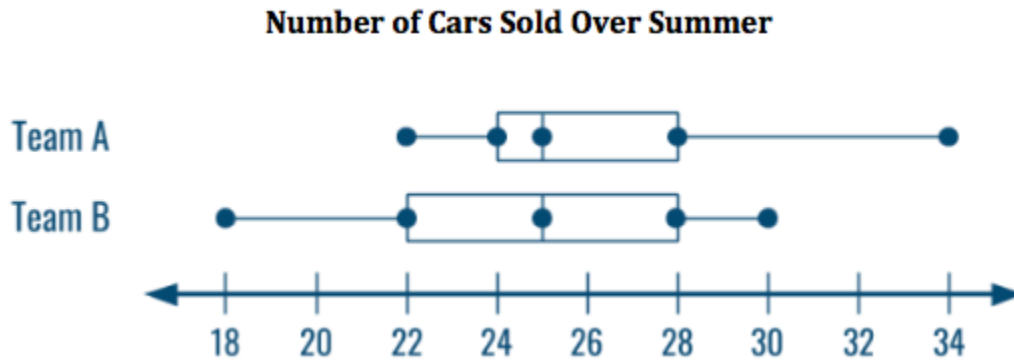
Name:

Class:

Algebra, Unit 1: Practice Summative Assessment

Question 1

The two box plots below summarize the number of cars sold over the summer by the members of two different teams of salespeople.



Part 1 Which statement must be true?

- Ⓐ Members of Team B typically sold more cars than members of Team A.
- Ⓑ The middle half of data for Team A has more variability than the middle half of the data for Team B.
- Ⓒ The median for Team A is greater than the median for Team B.
- Ⓓ 25% of the members of Team B sold fewer cars than the worst performing salesperson on Team A.

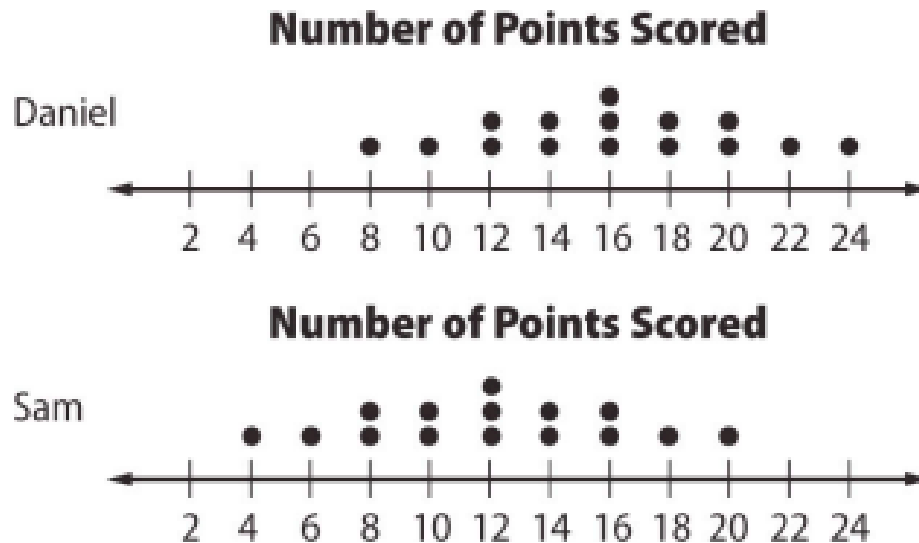
Part 2 If you were to apply the 1.5 IQR Rule for outliers, what would be the maximum data point that could be included for each team?

Team A maximum:

Team B maximum:

Question 2

The two dot plots show the scores on quizzes from two students. Select **all** true statements below?



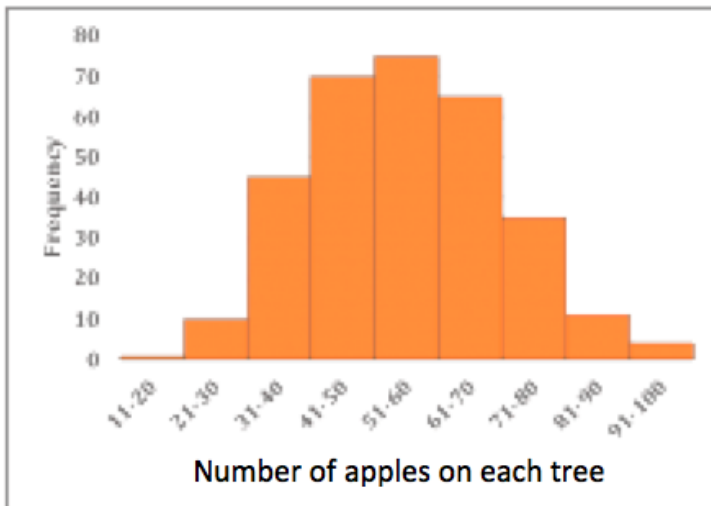
- A Both sets of data have the same standard deviation, which means both sets of data have the same variability.
- B Because both dot plots are symmetrical, the standard deviation for each is zero.
- C Daniel's median score is the same as his mean score.
- D Sam scored worse than Daniel on every quiz.
- E The data suggests that Daniel is expected to score 4 points better than Sam on the next quiz.

Question 3

An apple orchard is testing the new potential fertilizer SuperChem on some of its apple trees. Group A was not treated with SuperChem; Group B was.

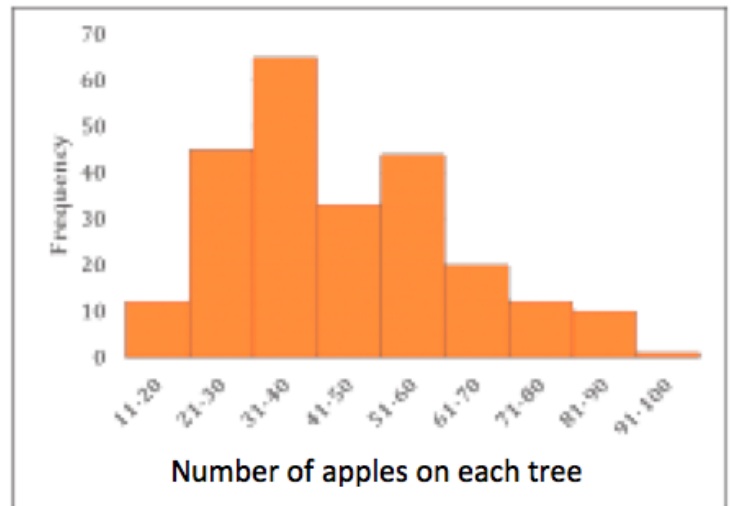
Group A

NOT treated with SuperChem



Group B

Treated with SuperChem



Part 1 Select **all** true statements below?

- (A) Group A has a lower standard deviation than Group B.
- (B) Group B has a lower median than Group A.
- (C) Group B's mean and median would be the same.
- (D) Group A's data is bell-shaped.
- (E) The orchard should give SuperChem to all of its trees next year.

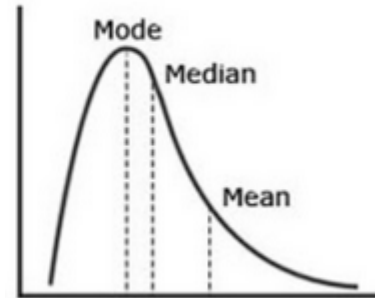
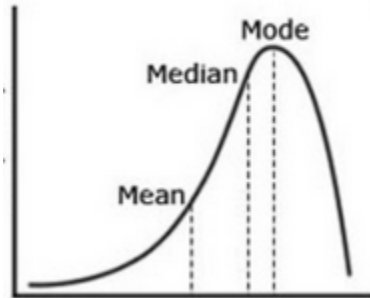
Part 2

An error was discovered in the data. One tree that was listed as having 15 apples actually had 95 apples (several apples were harvested a day earlier). Briefly describe how fixing this data error would affect the median for Group A.

Question 4

Part 1 Which of the following data sets is skewed right?

Circle one:



Part 2 When the data is skewed either right or left, which measure of center is most appropriate to use to describe a typical value in the data?

Circle one:

Mean

Median

Part 3 When the data is skewed either right or left, which measure of variability is preferred?

Circle one:

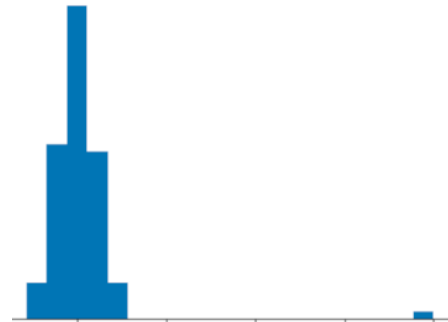
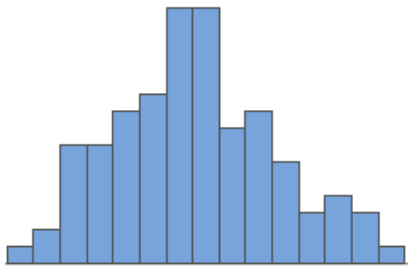
Standard deviation

Interquartile range

Question 5

Part 1 Which of the following data sets includes an outlier?

Circle one:



Part 2 When the data includes an outlier, which measure of center is most appropriate to use to describe a typical value in the data?

Circle one:

Mean

Median

Part 3 When the data includes an outlier, which measure of variability is preferred?

Circle one:

Standard deviation

Interquartile range

Question 6

Both Figure A and Figure B below are bell-shaped distributions that show a normal distribution of data.

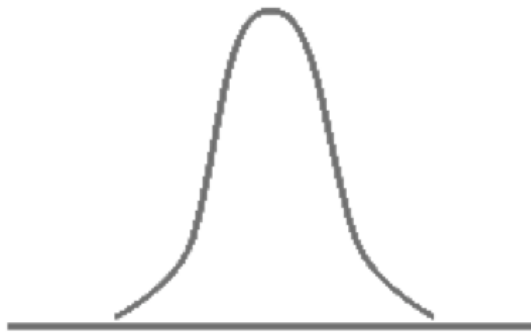


Figure A



Figure B

Part 1 Which data set has a greater standard deviation?

Circle one:

Figure A

Figure B

Part 2 Is the mean an appropriate measure of center for both Figure A and Figure B?

Circle one:

Yes

No