Simplify.

1) $5\sqrt{8r^5}$

$5 \cdot 2r^2\sqrt{2r}$

$10r^2\sqrt{2r}$

2) $-3\sqrt{36x^2y^3}$

$-3 \cdot 3 \cdot 2xy\sqrt{y}$

$-18xy\sqrt{y}$

Factor each completely.

3) $\frac{5x^2}{5} - \frac{10x}{5} - \frac{120}{5}$

$5(x^2 - 2x - 24)$

$5(x+4)(x-6)$

Complete first Google Form on Analyzing Statistics

PARTNERS

1. The hourly salaries of the workers at a restaurant are shown below.
$7.75, $8.50, $7.25, $9.00, $30.00, $8.25, $7.75, $9.00

Which statement is true?

A. The worker who earns $7.25 an hour causes the mean to be a better representation of the typical salary than the median.
B. The worker who earns $7.25 an hour causes the median to be a better representation of the typically salary than the mean.
C. The worker who earns $30.00 an hour causes the mean to be a better representation of the typical salary than the median.
D. The worker who earns $30.00 an hour causes the median to be a better representation of the typical salary than the mean.

2. The list below shows the number of hits six players on a baseball team had during a season.
24, 18, 36, 40, 28, 22

A seventh player on the team had 63 hits. Which measure would be affected the most by including the seventh player?

A. Mean B. Median C. Standard Deviation D. Interquartile Range

28 26 8.5 14
33 28 15.3 18
5 2

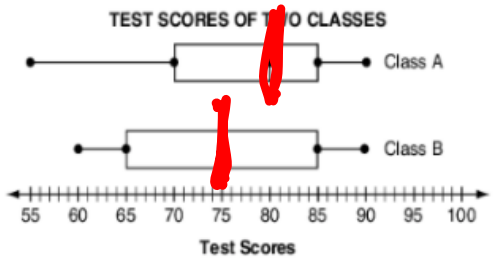
IQR stats(L)
Q3-Q1

3. The price at several different stores for a pair of shoes are shown below.
$78, $79, $81, $82, $83

Two days later, another store has the same shoes on sale for $65. How does the new price affect the data?

A. Only the range was affected.
B. The median increased, and the range increased.
C. The mean increased, and the range increased.
D. The mean decreased, and the range increased.

4. The box-and-whisker plots below show the distribution of math test scores of students in two different classes with the same, odd number of students.

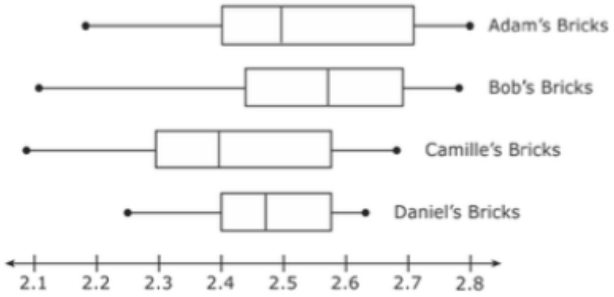


Which statement ***best*** compares the performance of class A and class B on this math test?

A. All students in class A performed better than all students in class B.
B. All students in class B performed better than all students in class A.
C. The majority of students in class A performed better than the majority of students in class B.
D. The majority of students in class B performed better than the majority of students in class A.

5. Box plots for four competing brick manufacturers are shown below.

Heights of Manufacturer's Bricks



A contractor needs bricks to buy bricks that are each as close to 2.5 inches high as possible. Which manufacturer would be the contractor's ***best*** choice?

A. Adam's Bricks
B. Bob's Bricks
C. Camille's Bricks
D. Daniel's Bricks

6. The list below shows the number of baseball cards seven people own.
130, 142, 145, 145, 150, 163, 121

An eighth person owns 842 baseball cards. What effect does the eight person have on the distribution of the data?

A. The data distribution will become skewed to the left.
B. The data distribution will become skewed to the right.
C. The data distribution will become more symmetric.
D. The data distribution will become less spread.

7. During each six-week grading period, the students in Mr. Welsh's math class are allowed to drop their lowest test score. Kim had the following scores: 96, 84, 84, 73, 87, 100, and [illegible]. If Kim drops her lowest test score, which measure will be most affected?

A. Mean
B. Median
C. Interquartile Range
D. Standard Deviation

Q3-Q1 state
stdev

8. An outlier with the value of 14 is added to the data set 3, 4, 5, 6, and 7. How does the outlier affect the mean and median?

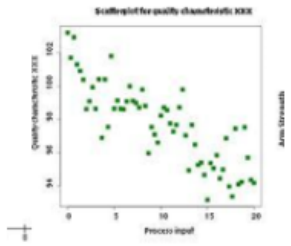
A. The mean increases by 0.5, and the median increases by 1.5.
B. The mean increases by 1.5, and the median increases by 0.5.
C. The mean increases by 1.5, and the median increases by 2.0.
D. The mean increases by 2.0, and the median increases by 1.5.

Complete 2nd Google Form on Data

1. Describe the shape and what measure you should use to represent the following graph. *

- ○ symmetrical, mean
- ○ skewed left, median
- ○ skewed right, median
- ○ skewed left, mean
- ○ skewed right, mean

2. Which correlation coefficient value most closely represents the graph? *



- -0.98
- -0.87
- 0
- 0.64
- 0.99

3. The number of points scored by a basketball player in the first eight games of a season are 15, 35, 18, 30, 25, 21, 32, 16. What would happen to the shape of data distribution if she scored 24, 22, 27, and 28 points in her next four games? *

- A. The distribution would become more spread out.
- B. The distribution would become right-skewed.
- C. The distribution would become more symmetric and peaked.
- D. The distribution would become left-skewed.

4. The table below shows the area of several states measured in thousands of square miles. California has an area of 163,000 square miles. Which is true if California is included in the data set?

State	Area
Georgia	59
Connecticut	6
Maryland	12
Massachusetts	11
New Hampshire	9
New York	54
North Carolina	54

cali 163

A. The mean decreases.

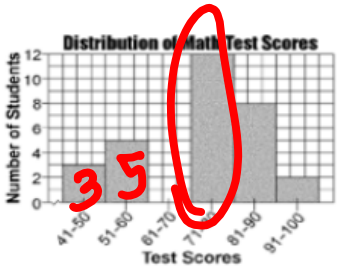
B. The range decreases.

most

C. The mode increases.

D. The standard deviation increases.

5. The histogram below shows the distribution of scores on a recent science test. What approximate percentage of the students scored between a 71 and an 80?



3 5

$\frac{12}{30} \approx 40\%$

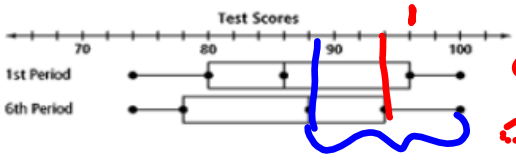
12%

40%

60%

80%

6. The following box-and-whisker plots show the test scores for two classes on a recent test. Which of the following statements are FALSE?



96-80 = 16
94-78 = 16

- T 50% of 1st period scored below an 86%.
- T 1st and 6th period had the same IQR.
- F 50% of 6th period scored above a 88%.
- 1st period's median is 2 points lower than 6th period's median.

7. Which of the following is most likely to have the highest standard deviation scores? *

- Scores of 10 baseball games
- Scores of 10 basketball games
- Scores of 10 soccer games
- Scores of 10 football games

8. Charles scored the following points in a basketball game: 10, 12, 15, 20, 21, 23, 24, 25,30,15. He * then scores 20,20,21. Which of the following is true?

- ○ The standard deviation increases
- ○ The standard deviation decreases
- ○ The standard deviation stays the same

9. The real estate section of a local newspaper listed the homes sold in the past months. The following are the sale prices of each home: $124,000; $136,000; $116,000; $127,000; $141,000; $131,000; $116,000; $160,000; $139,000. What measure should be used to represent the data?

- ○ mean
- ○ median
- ○ mode

10. The manager of a bowling alley recorded the number of games bowled at the alley in the last two weeks. The data is 18, 12, 5, 18, 15, 19, 4, 16, 15, 13, 16, 15. Which statement is correct?

mean 15.7 13.8
stdev 2.2 4.8
med 15.5 15

- X The value of the mean decreases if the outliers are excluded.
- X The value of the standard deviation increases if the outliers are excluded.
- O The value of the median increases by 0.5 if the outliers are excluded.
- The value of the mean remains the same even if the outliers are excluded.

1. Quizizz: Analyze Scatter Plots

2. Quizizz: System of Linear Inequalities