2023 MATHLETES CHALLENGE

SUDDEN DEATH

TEST 2

2023 Mathletes Sudden Death 2

Test 2 - You will have **5** minutes to complete this 12 question test. Good luck!

* Required

1. **What is your team name?** Example: Terry Team 2 *

2023 Sudden Death 2

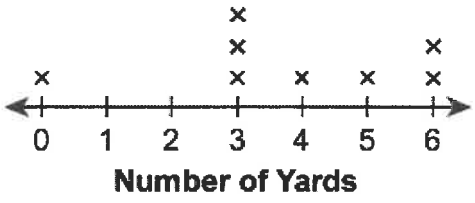
2. Question 1 * 1 point

Carter is a quarterback for a football team. The list below shows the number of yards his team gained on his last 10 completed passes.

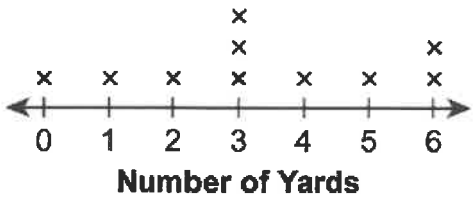
6 3 4 −2 −1 6 5 0 3 3

Which line plot also shows the number of yards Carter's team gained on his last 10 completed passes?

A.



B.



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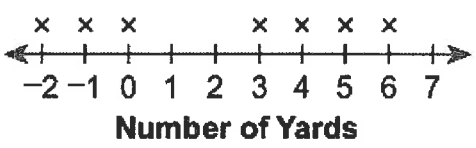

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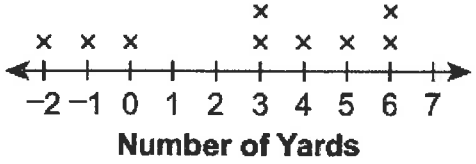
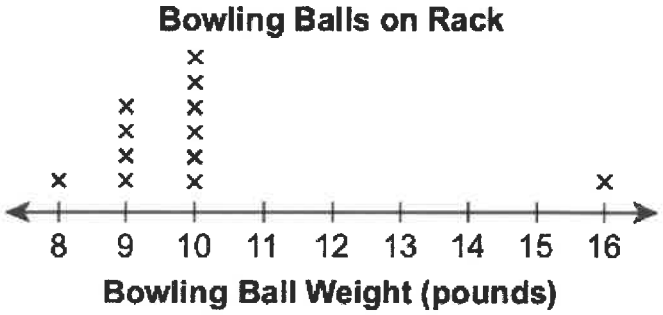


Mark only one oval.

- ◯ A
- ◯ B
- ◯ C
- ◯ D

3. Question 2 * 1 point

The line plot below shows the weights, in pounds, of twelve bowling balls on a rack.



Which statement about the weights of these bowling balls is true?

A. The weights cluster from 8 pounds to 10 pounds, and 8 pounds is an outlier.
B. The weights cluster from 11 pounds to 15 pounds, and 8 pounds is an outlier.
C. The weights cluster from 8 pounds to 10 pounds, and 16 pounds is an outlier.
D. The weights cluster from 11 pounds to 15 pounds, and 16 pounds is an outlier.

Mark only one oval.

- A
- B
- C
- D

4. Question 3 * 1 point

What value of x makes this equation true?

$$2x - 1 = 9$$

Ⓐ $x = 3\frac{1}{2}$

Ⓑ $x = 4$

Ⓒ $x = 5$

Ⓓ $x = 5\frac{1}{2}$

Mark only one oval.

- A
- B
- C
- D

5. Question 4 * 1 point

Consider this expression.

$$(7x + 8) - (3x + 5)$$

Which of the following is equivalent to the expression?

Ⓐ $10x + 3$

Ⓑ $10x + 13$

Ⓒ $4x + 3$

Ⓓ $4x + 13$

Mark only one oval.

- A
- B
- C
- D

6. Question 5 * 1 point

A teacher runs each morning before school.

- Last week, he ran a total of $5\frac{3}{4}$ miles.
- This week, he ran $\frac{4}{5}$ of the total number of miles he ran last week.

What is the total number of miles that the teacher ran last week **and** this week?

Ⓐ $6\frac{11}{20}$ miles

Ⓑ $10\frac{7}{20}$ miles

Ⓒ $11\frac{7}{20}$ miles

Ⓓ $12\frac{15}{16}$ miles

Mark only one oval.

- ◯ A
- ◯ B
- ◯ C
- ◯ D

7. Question 6 * 1 point

A student bought a computer game that cost q dollars. The student paid 6% sales tax on the cost of the computer game.

Which of the following expressions can be used to represent the total amount, in dollars, the student paid for the computer game?

Select the **two** correct answers.

Ⓐ $0.94q$

Ⓑ $1.06q$

Ⓒ $q + 0.06$

Ⓓ $q - 0.06$

Ⓔ $q + 0.06q$

Ⓕ $q - 0.06q$

Mark only one oval. two

- ◯ A
- ◯ B
- ◯ C
- ◯ D
- ◯ E
- ◯ F

8. Question 7 * 1 point

In Fairbanks, Alaska, the average temperature in February is −3.6°F, and the average temperature in March is 11°F.

What is the difference in the average temperatures for February and March in Fairbanks, Alaska?

Ⓐ 7.4°F

Ⓑ 8.6°F

Ⓒ 13.4°F

Ⓓ 14.6°F

Mark only one oval.

- ◯ A
- ◯ B
- ◯ C
- ◯ D

9. Question 8 * 1 point

Consider this expression.

$$-4(-3x + 1)$$

Which of the following is equivalent to the expression?

Ⓐ $-12x + (-3)$

Ⓑ $-7x + (-4)$

Ⓒ $7x + (-3)$

Ⓓ $12x + (-4)$

Mark only one oval.

- A
- B
- C
- D

10. Question 9 * 1 point

The length of a building is 60 feet. The length of the building on a scale drawing is 4 inches.

Which ratio describes the scale of the drawing?

Ⓐ 1 inch : 4 feet

Ⓑ 1 inch : 15 feet

Ⓒ 1 inch : 30 feet

Ⓓ 1 inch : 60 feet

Mark only one oval.

- A
- B
- C
- D

11. Question 10 * 1 point

An athlete did sit-ups each day for 3 days. She did a total of 325 sit-ups.

- On the first day, she did 124 sit-ups.
- On the second day, she did $\frac{3}{4}$ the number of sit-ups she did on the first day.

Which of the following statements about the number of sit-ups the athlete did on the second and the third days is true?

Ⓐ The athlete did 93 sit-ups on the second day and 108 sit-ups on the third day.

Ⓑ The athlete did 93 sit-ups on the second day and 217 sit-ups on the third day.

Ⓒ The athlete did 108 sit-ups on the second day and 93 sit-ups on the third day.

Ⓓ The athlete did 108 sit-ups on the second day and 217 sit-ups on the third day.

Mark only one oval.

- ◯ A
- ◯ B
- ◯ C
- ◯ D

12. Question 11 * 1 point

A babysitter bought 6 cans of juice for a total of $4.50. Each can of juice cost the same amount. Which of the following proportions can be used to find c, the cost, in dollars, of 4 cans of juice?

Ⓐ $\frac{6}{4.50} = \frac{4}{c}$

Ⓑ $\frac{6}{4.50} = \frac{c}{4}$

Ⓒ $\frac{6+4}{c} = \frac{1}{4.50}$

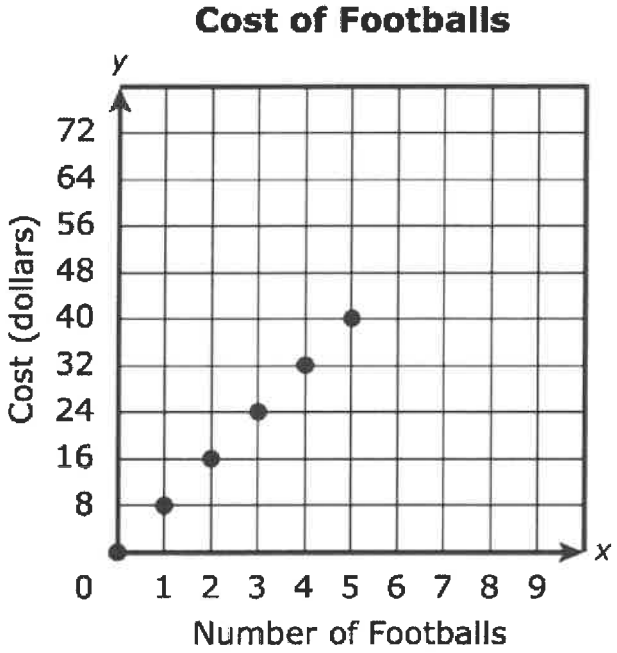
Ⓓ $\frac{6+4}{c} = \frac{6}{4.50}$

Mark only one oval.

- A
- B
- C
- D

13. Question 12 * 1 point

This graph shows the relationship between x, the number of footballs a team orders, and y, the total cost in dollars of the footballs.



Based on the graph, which of the following statements about the cost of footballs is correct?

Ⓐ The cost of 4 footballs is $4. The unit rate per football is $1.

Ⓑ The cost of 4 footballs is $24. The unit rate per football is $6.

Ⓒ The cost of 4 footballs is $32. The unit rate per football is $8.

Ⓓ The cost of 4 footballs is $40. The unit rate per football is $10.

Mark only one oval.

- A
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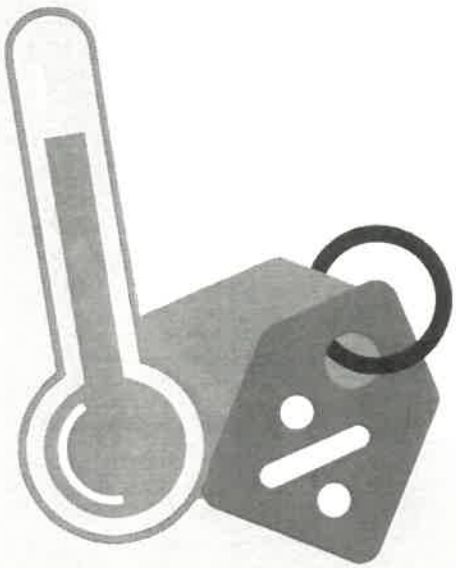

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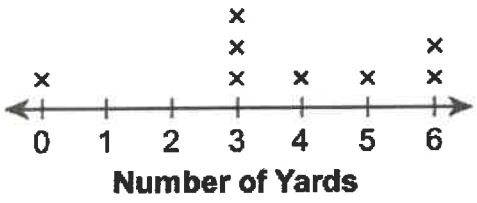

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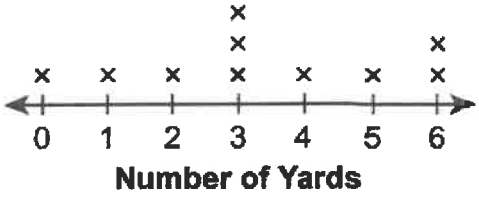

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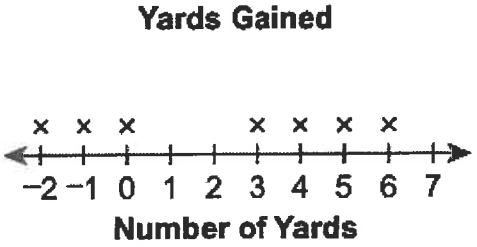

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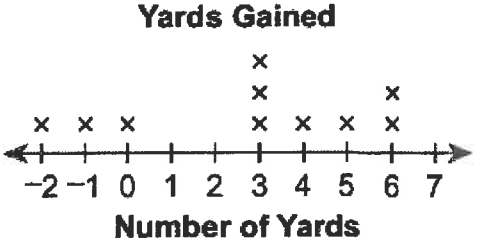

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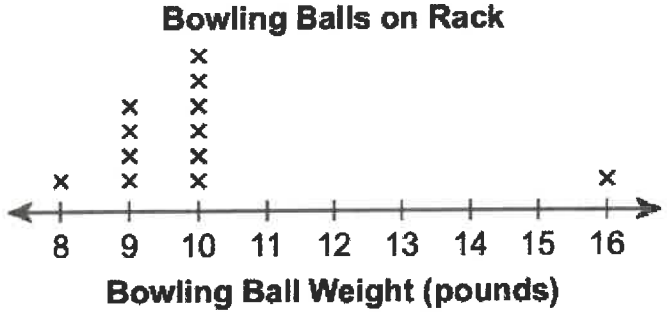

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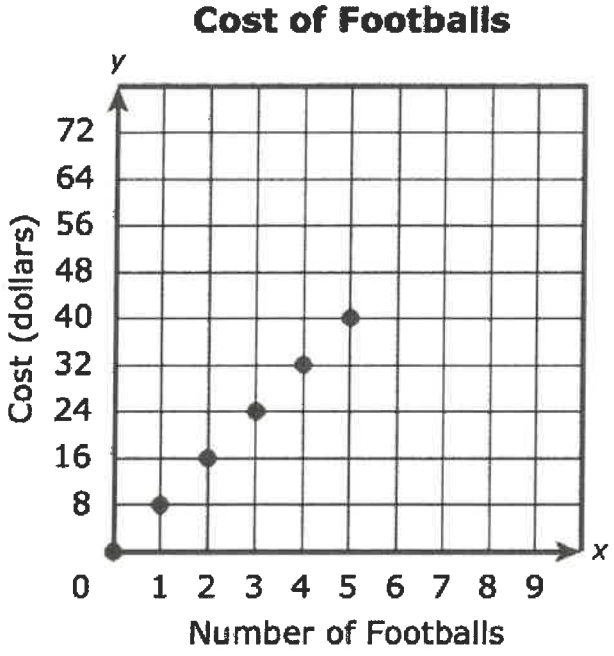

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