Algebra Quick Quiz

September 19,2019

1

What value of t satisfies the equation below?

$$\frac{4}{3t} = 24$$

A $t = \frac{1}{18}$

B $t = \frac{1}{2}$

C $t = 2$

D $t = 18$

2.

In a game, the two players scored a total of 121 points. One player had 13 more points than the other player. How many points did the player with the fewer points score?

A   52
B   54
C   67
D   108

3.

Nancy determined that 48 out of the 108 students in tenth grade play a musical instrument. What fraction of the students plays a musical instrument?

A $\dfrac{8}{27}$

B $\dfrac{1}{3}$

C $\dfrac{4}{9}$

D $\dfrac{4}{5}$

4.

If $5x - 14 \geq 0$, what is the LEAST possible value of x?

A $-\dfrac{14}{5}$

B $-\dfrac{5}{14}$

C $\dfrac{5}{14}$

D $\dfrac{14}{5}$

5.

In the equations below, *a* is the price, in dollars, of an adult ticket to a school play, and *s* is the price of a student ticket.

$$5a + 3s = 42$$
$$3a + s = 22$$

What is the price of an adult ticket to the play?

A $4
B $5
C $6
D $10

6.

If $C = \frac{5}{9}(F - 32)$, where C is the temperature in degrees Celsius and F is the temperature in degrees Fahrenheit, what is the value of C when $F = 86$?

A   30
B   32
C   45
D   54

7.

The stem-and-leaf plot below shows the heights of 17 students.

Height (in inches)

5	9
6	0 1 2 2 4 5 6 7 8 8 8 9
7	0 1 2 2

Key: 5 | 9 represents 59 inches.

What is the mode of the heights?

A   62 in.
B   67 in.
C   68 in.
D   72 in.

8.

The line with equation $y = 10x - 2$ intersects the x-axis at the point $(a, 0)$. What is the value of a?

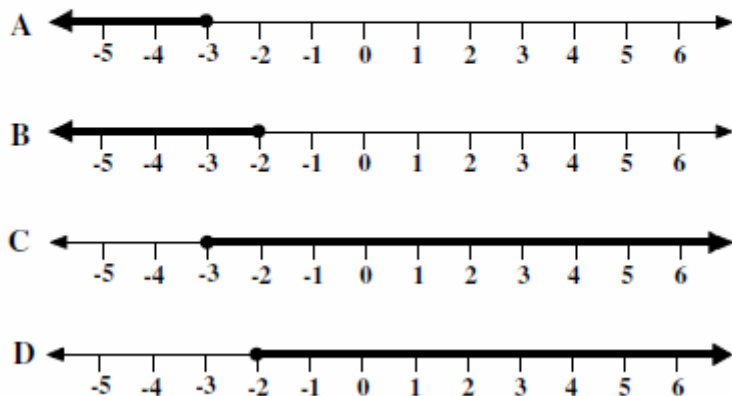A -2

B $\dfrac{1}{5}$

C 5

D 10

9.

Which number equals $3\sqrt{56}$?

A $6\sqrt{14}$
B $12\sqrt{7}$
C $15\sqrt{6}$
D $8\sqrt{28}$

10.

Which graph shows the values of *x* that satisfy the inequality below?

$$2x \geq -6$$

A

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   -5  -4  -3  -2  -1   0   1   2   3   4   5   6
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B

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   -5  -4  -3  -2  -1   0   1   2   3   4   5   6
```

C

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   -5  -4  -3  -2  -1   0   1   2   3   4   5   6
```

D

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◄─┬─┬─┬─●━━━━━━━━━━━━━━━━━━━━►
   -5  -4  -3  -2  -1   0   1   2   3   4   5   6
```

BONUS

11.

The formula for finding the perimeter, *P*, of a rectangle with length *l* and width *w* is given.

$$P = 2l + 2w$$

Which formula shows how the length of a rectangle can be determined from the perimeter and the width?

Ⓐ $l = \dfrac{P}{2} - 2w$

Ⓑ $l = \dfrac{P - 2w}{2}$

Ⓒ $l = \dfrac{P}{2} + w$

Ⓓ $l = \dfrac{P - 2}{2w}$