

CAHSEE MR & Alg**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

1. What is the reciprocal of $-\frac{4}{7}$?

- A $-\frac{7}{4}$
- B $\frac{4}{7}$
- C $\frac{7}{4}$
- D $-1\frac{7}{4}$

2. What is the solution for this equation?
 $|x + 7| = 15$

- A $x = 8$ or $x = 11$
- B $x = -8$ or $x = 11$
- C $x = 8$ or $x = -22$
- D $x = 8$ or $x = -8$

3. What is the solution set of the inequality
 $|x - 2| < 6$?

- A $-4 < x < 8$
- B $-8 < x < 4$
- C $x < 8$
- D $x < -4$ or $x > 8$

4. Which equation is equivalent to
 $3 - 2(x + 7) = 12$?

- A $3 - 2x - 14 = 12$
- B $3 - 2x + 7 = 12$
- C $-2x - 14 = 15$
- D $x - 14 = 12$

5. Which inequality is equivalent to
 $4x - 3(x - 2) \geq 24$?

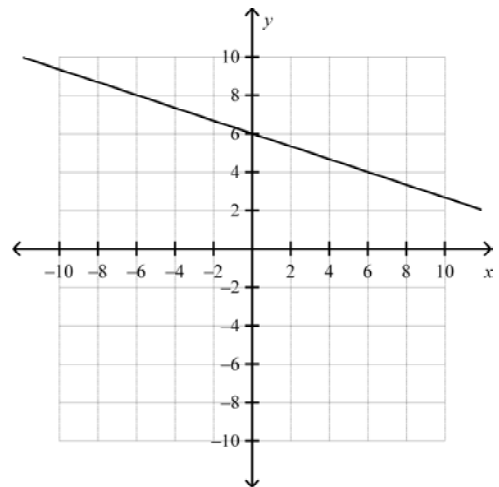
- A $4x - 3x - 2 \geq 24$
- B $4x - 3x + 6 \geq 24$
- C $x - 2 \geq 24$
- D $7x - 6 \geq 24$

6. Solve: $10x - 4 = 5x + 11 + 2x$
 Step 1: $10x - 4 = 7x + 11$
 Step 2: $3x - 4 = 11$
 Step 3: $3x = 7$
 Step 4: $x = \frac{7}{4}$

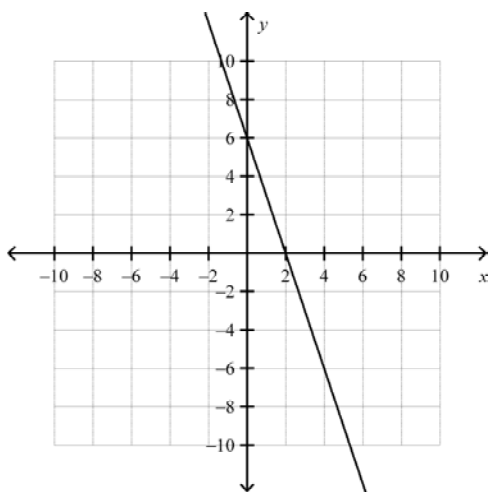
Which is the first *incorrect* step in the solution shown above?

- A Step 1
- B Step 2
- C Step 3
- D Step 4

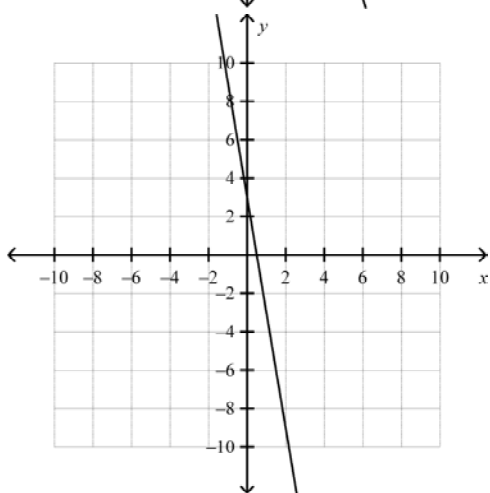
7. Which shows the graph of the equation $2y + 6x = 12$?



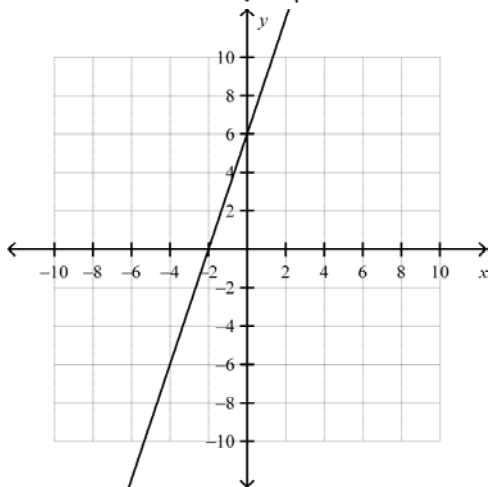
A



B

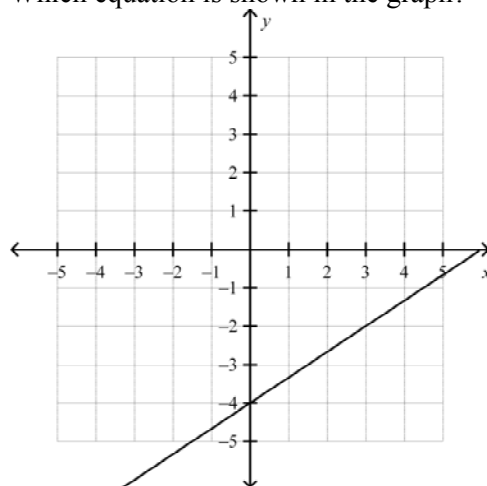


C



D

8. Which equation is shown in the graph?



- A $y = \frac{3}{2}x - 4$
- B $y = -\frac{2}{3}x - 4$
- C $y = \frac{2}{3}x + 4$
- D $y = \frac{2}{3}x - 4$

9. Which is the equation, in slope-intercept form, of the line that has a slope of 2 and passes through the point $(-4, 2)$?

- A $y = 2x + 4$
- B $y = 2x + 6$
- C $y = 2x + 8$
- D $y = 2x + 10$

10. Which of the following points lies on the line defined by $-6x = 3y + 18$?

- A $(1, -8)$
- B $(3, 0)$
- C $(0, 6)$
- D $(-1, -8)$

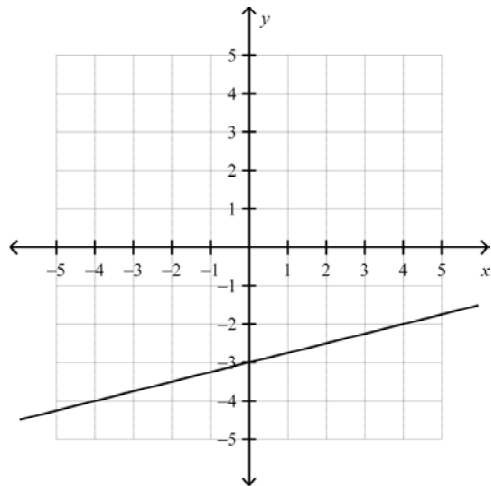
11. What is the equation, in slope-intercept form, of the line that has a slope of 2 and passes through the point $(0, -5)$?

A $y = 2x + 5$
 B $y = 2x - 3$
 C $y = 2x + 3$
 D $y = 2x - 5$

12. Which equation below represents a line that is parallel to $y = -3x + 2$?

A $y = 3x + 2$
 B $y = -3x + 4$
 C $y = 3x + 4$
 D $y = \frac{1}{3}x + 4$

13. Which of the following equations is parallel to the graph below?



A $y = \frac{1}{4}x + 3$
 B $y = \frac{1}{3}x + 2$
 C $y = -4x + 3$
 D $y = 4x + 5$

14. What is the solution to this system of equations?

$$\begin{cases} 2x - y = -7 \\ x + 3y = 7 \end{cases}$$

A $(-2, -3)$
 B $(2, -3)$
 C $(-2, 3)$
 D $(2, 3)$

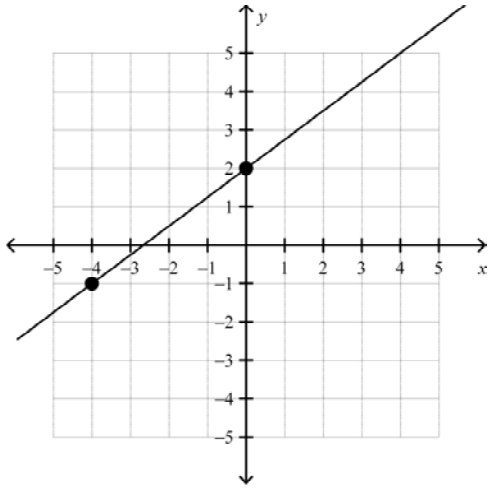
15. What is the simplest form of the expression $\frac{8x^4}{28x^9}$?

A $\frac{2}{14x^5}$
 B $\frac{4x^5}{7}$
 C $\frac{2}{7x^5}$
 D $\frac{4}{7x^5}$

16. $(-5x^2 - x + 4) + (4x^3 - 4x^2 + 3) =$

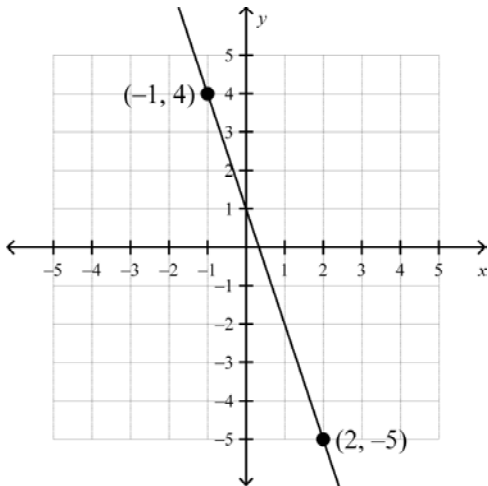
A $-4x^3 - x^2 - x + 7$
 B $-x^3 - 5x^2 + 7$
 C $4x^3 - 9x^2 - x + 7$
 D $4x^2 - x^2 + x + 7$

17. What is the slope of the line shown below?



- A $\frac{1}{3}$
- B $\frac{3}{4}$
- C 2
- D 4

18. What is the slope of the line shown below?



- A -3
- B $-\frac{1}{3}$
- C $\frac{1}{3}$
- D 3

19. What is the solution set to the inequality $5x + 2 < 37$?

- A $\{x: x < 7\}$
- B $\{x: x < 30\}$
- C $\{x: x < 35\}$
- D $\{x: x > 7\}$

20. What value of z makes the equation below true?
 $-6z - 5 = 7$?

- A -2
- B -1
- C $\frac{1}{3}$
- D 2

21. What is the solution set to the inequality $12y - 9 > 39$?

- A $\{y: y > -3\}$
- B $\{y: y > 3\}$
- C $\{y: y > 4\}$
- D $\{y: y < 4\}$

22. It takes Carly 39 minutes to walk 3 miles. At that rate, how long will it take Carly to walk 7 miles?

- A 52 minutes
- B 78 minutes
- C 91 minutes
- D 273 minutes

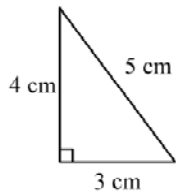
23. Jessica earns \$35 for 7 hours of babysitting. She is saving to buy a \$160 radio. How many hours will Jessica have to babysit to have enough money to buy the radio?

- A 14 hours
- B 28 hours
- C 30 hours
- D 32 hours

24. Max is traveling at a speed of 62 miles per hour. If he travels at this speed for 10 hours, which of the following is *not* a reasonable estimate for the distance Max traveled?

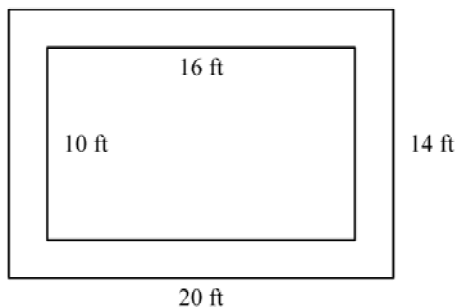
A 600 miles
B 620 miles
C 650 miles
D 800 miles

25. Find the area of the figure below.



A 6 cm^2
B 12 cm^2
C 30 cm^2
D 60 cm^2

26. A garden has a walkway around the perimeter of the outside of the garden as shown below. What is the area of the walkway?



A 120 ft^2
B 136 ft^2
C 160 ft^2
D 280 ft^2

27. Alejandro needed 1.25 gallons of gasoline for his lawnmower. He had 0.9 gallons of gas. How much more gas did he need?

A 0.25
B 0.35
C 0.45
D 2.15

28. Tina ate 2.5 pieces of pizza. This represented $\frac{1}{4}$ of the entire pizza. How many pieces were in the pizza?

A 6
B 8
C 10
D 12

29. Caroline baked cookies from a recipe that called for $\frac{3}{4}$ cup of sugar. She planned to triple the recipe. How much sugar did she need?

A $1\frac{1}{2}$ cups
B $1\frac{3}{4}$ cups
C $2\frac{1}{4}$ cups
D 3 cups

30. Selena wants to buy a trumpet. She has a coupon for 20% off any item in the music store. The original price of the trumpet was \$299. After she used her coupon, how much will she pay for the trumpet?

A \$59.80
B \$239.20
C \$249.00
D \$279.00

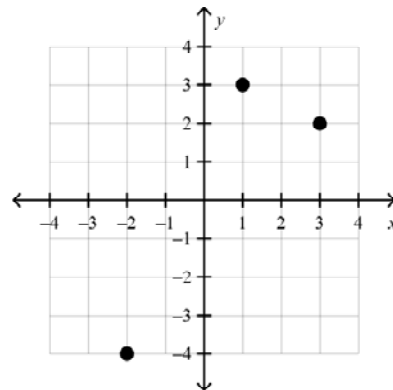
31. Bianca makes bracelets and sells them for \$9 each to a store. The store sells the bracelets for \$22.50. What is the percent markup on each bracelet?

A 125%
B 150%
C 250%
D 300%

32. Lamar knows that the perimeter of a square equals 50 cm. If the length of a side of the square is s units long, which of the following equations can be used to solve for the length of a side of the square?

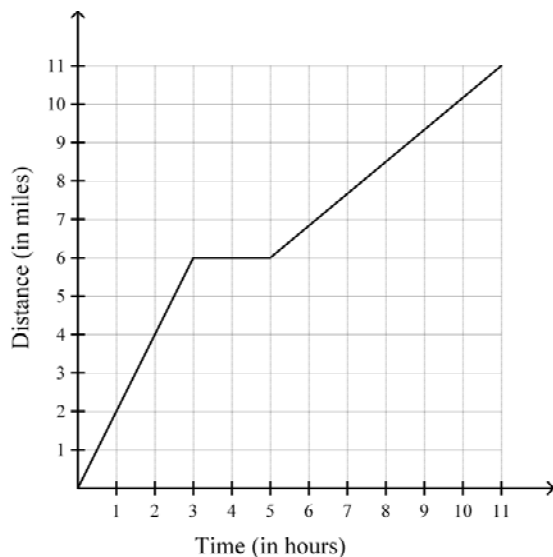
A $4s = 50$
B $4 + s = 50$
C $s^2 = 50$
D $2s = 50$

33. Which of the following is *not* a point on the graph below?



A (3, 1)
B (-2, -4)
C (3, 2)
D (1, 3)

The graph below shows the time and distance that Cory traveled while walking.



34. How far did Cory travel after 3 hours?

A 2 miles
B 3 miles
C 5 miles
D 6 miles

35. During what time was Cory walking the fastest?

A 0-3 hours
B 3-5 hours
C 5-8 hours
D He is always walking at the same speed.

36. Which of the following could explain what happened between 3 and 5 hours?
- A Cory was resting.
 - B Cory was running.
 - C Cory was walking at a constant speed.
 - D Cory was walking very slowly.