

19 The graph of which equation passes through the points  $(-1, -3)$  and  $(-2, 3)$ ?

- A  $y = -6x - 9$
- B  $y = -\frac{1}{4}x + 3$
- C  $y = 4x - 5$
- D  $y = \frac{2}{3}x + 1$

20 Which product is irrational?

- A.  $\sqrt{2} \cdot \sqrt{50}$
- B.  $\sqrt{64} \cdot \sqrt{4}$
- C.  $\sqrt{9} \cdot \sqrt{49}$
- D.  $\sqrt{10} \cdot \sqrt{8}$

21 If  $f(12) = 4(12) - 20$ , which function gives  $f(x)$ ?

- A.  $f(x) = 4x^2 - 20$
- B.  $f(x) = 4^x - 20$
- C.  $f(x) = 4x - 20$
- D.  $f(x) = 4x^2 + 12x - 20$

22 Which function has a range of  $f(x) \leq \frac{3}{4}$ ?

- A.  $f(x) = \frac{3}{4}x + 5$
- B.  $f(x) = -x^2 + \frac{3}{4}$
- C.  $f(x) = x^2 - \frac{3}{4}$
- D.  $f(x) = \frac{3}{4} - 5x$

23 At a museum, each child admission costs \$5.75 and each adult costs \$8.25. How much does it cost a family that consists of 2 adults and 4 children?

- A \$34.50
- B \$39.50
- C \$44.50
- D \$49.50

24 What is the solution of the following system of equations?

- $$\begin{cases} y = 6x - 1 \\ y = 6x + 1 \end{cases}$$
- A  $(2, 11)$
  - B  $(-3, -14)$
  - C  $(7, 5)$
  - D no solution

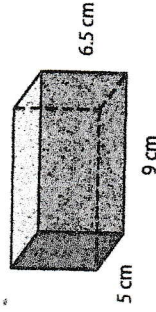
25 A popular pizza parlor charges \$12 for a large cheese pizza plus \$1.50 for each additional topping. Write an equation in slope-intercept form for the total cost C of a pizza with t toppings.

- A  $C = 12t + 1.50$
- B  $C = 13.50t$
- C  $C = 12 + 1.50t$
- D  $C = 1.50t - 12$

26 Each year a local country club sponsors a tennis tournament. Play starts with 256 participants. During each round, half of the players are eliminated. How many players remain after 6 rounds?

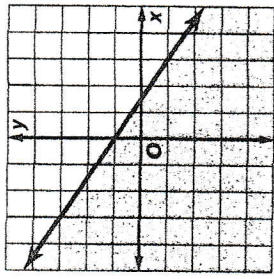
- A 128
- B 64
- C 16
- D 4

27 Find the volume of the figure below.



- A  $18.5 \text{ cm}^3$
- B  $91 \text{ cm}^3$
- C  $272 \text{ cm}^3$
- D  $292.5 \text{ cm}^3$

28 Which inequality is shown in the graph?



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

29 Which of the following is not a factor of  $x^4 - 6x^2 - 27$ ?

- A  $x^2 + 3$
- B  $x - 3$
- C  $x + 3$
- D  $x^2 - 3$

30 The table shows the number of Calories in twelve different snacks. Find the mean absolute deviation.

| Number of Calories in Snacks |     |     |
|------------------------------|-----|-----|
| 122                          | 91  | 149 |
| 64                           | 138 | 342 |
| 179                          | 105 | 99  |
|                              |     | 114 |

- A 46
- B 43
- C 1.5
- D 0.8