

1) What is the **slope** of the graph of $y = 13x - 10$?

- A. -10 B. $-\frac{13}{10}$ C. 13 D. $\frac{10}{13}$

2) Which expression is **equivalent** to $5\sqrt{162}$?

- A. $90\sqrt{5}$ B. $16\sqrt{3}$ C. $6\sqrt{40}$ D. $45\sqrt{2}$

3) Which function is **equivalent** to $g(x) = 4x^2 - 20x + 25$?

- A. $g(x) = (2x - 5)(2x + 5)$ C. $g(x) = (4x - 1)(x + 25)$
 B. $g(x) = (2x - 5)^2$ D. $g(x) = (2x + 5)^2$

4) Which table does **Not** show y as a function of x ?

A.

| | | | | | |
|-----|----|----|----|---|---|
| x | -6 | -2 | -7 | 3 | 2 |
| y | 3 | -1 | 9 | 2 | 7 |

B.

| | | | | | |
|-----|---|----|---|---|---|
| x | 3 | -8 | 0 | 5 | 8 |
| y | 5 | 5 | 5 | 5 | 5 |

C.

| | | | | | |
|-----|----|----|----|----|---|
| x | -6 | 14 | -3 | 10 | 0 |
| y | -6 | 14 | -3 | 10 | 0 |

D.

| | | | | | |
|-----|----|---|----|---|----|
| x | -4 | 9 | -1 | 3 | -4 |
| y | 9 | 4 | -6 | 2 | 5 |

5) Which function is **equivalent** to $y = 2(x - 3)^2 + 5$?

- A. $y = 2x^2 - 12x + 23$ C. $y = 2x^2 + 23$
 B. $y = 2x^2 - 12x + 13$ D. $y = 2x^2 + 13$

6) What is the **solution** to $7r - 1 = -4 + 3(2r - 6)$?

Answer : _____.

7) Which value of x is a **solution** to this equation?

$$5x^2 - 28x - 96$$

- A. $x = -8$ B. $x = -2.4$ C. $x = 5.4$ D. $x = -6$

8) What is the value of x in the **solution** to this **system of equations** ?

$$-3x + 4y = 20$$

$$y = 5x - 4$$

- A. -2 B. 6 C. 2 D. -6

9) Which expression is **equivalent** to $8h^2 - 24h$?

- A. $8h(h - 3)$ C. $8h(h + 3)$
 B. $8(8h - 3)$ D. $8(3h - 8)$

10) Which expression is **equivalent** to $16x^2 + 38x - 5$?

- A. $(8x + 1)(2x - 5)$ C. $(4x - 5)(4x + 1)$
 B. $(8x - 1)(2x + 5)$ D. $(16x - 1)(x + 5)$

11) What is the **y-intercept** of $y = 16(0.4)^x$?

Answer : _____.

12) Which expression is **equivalent** to:

$$(8r^2 + 6r - 3) - (3r^2 + 2r - 10)$$

- A. $5r^2 + 4r + 7$ C. $-5r^2 + 4r - 13$
 B. $5r^2 - 4r - 13$ D. $-5r^2 - 4r - 7$

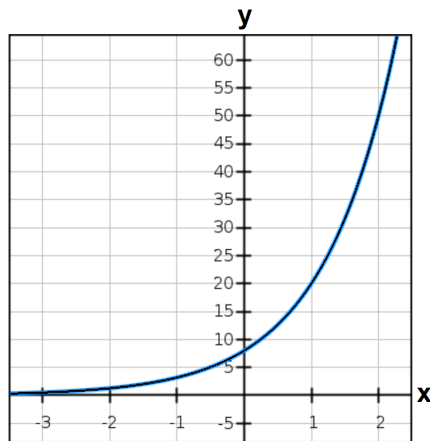
13) Which **value of x** makes the equation $1.25(x - 4) = 6$ **true**?

- A. 6.4 B. 8.8 C. 7.6 D. 14.8

14) What is the **positive solution** to $2x^2 + 7x = 60$?

Answer : _____.

15) An **exponential** function is graphed on the grid.



Which function is best represented by the graph?

- A. $g(x) = 8 + (\frac{5}{2})^x$ C. $g(x) = 8(\frac{2}{5})^x$
 B. $g(x) = 8 + (\frac{2}{5})^x$ D. $g(x) = 8(\frac{5}{2})^x$

16) What is the equation in **slope-intercept form** of the line that passes through the points $(4, -3)$ and $(20, 9)$?

- A. $y = 0.75x + 6$ C. $y = 0.75x - 6$
 B. $y = 6x - 0.75$ D. $y = 6x + 0.75$

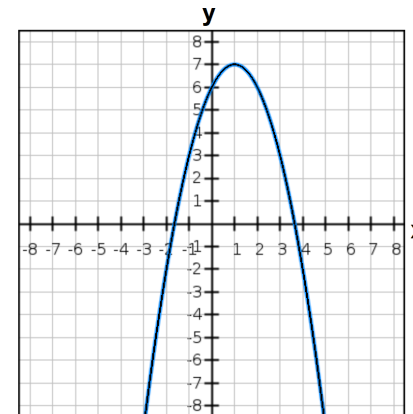
17) The **table** shows a linear relationship between x and y.

| | | | | |
|----------|------------|----------|----------|-----------|
| x | -15 | 0 | 5 | 20 |
| y | -2 | 4 | 6 | 12 |

What is the **rate of change** of y with respect to x?

- A. $\frac{5}{2}$ B. $-\frac{2}{5}$ C. $-\frac{5}{2}$ D. $\frac{2}{5}$

18) The graph of a **quadratic function** is shown on the grid.



Which function is best represented by this graph?

- A. $g(x) = -x^2 + 2x + 6$ C. $g(x) = -x^2 + 2x - 6$
 B. $g(x) = -x^2 - 2x - 6$ D. $g(x) = -x^2 - 2x + 6$

Answer Key-1

| | |
|-----------|------------|
| 1 | C |
| 2 | D |
| 3 | B |
| 4 | D |
| 5 | A |
| 6 | -21 |
| 7 | B |
| 8 | C |
| 9 | A |
| 10 | B |
| 11 | 16 |

Answer Key-1

| | |
|-----------|----------|
| 12 | D |
| 13 | B |
| 14 | 4 |
| 15 | D |
| 16 | C |
| 17 | D |
| 18 | A |