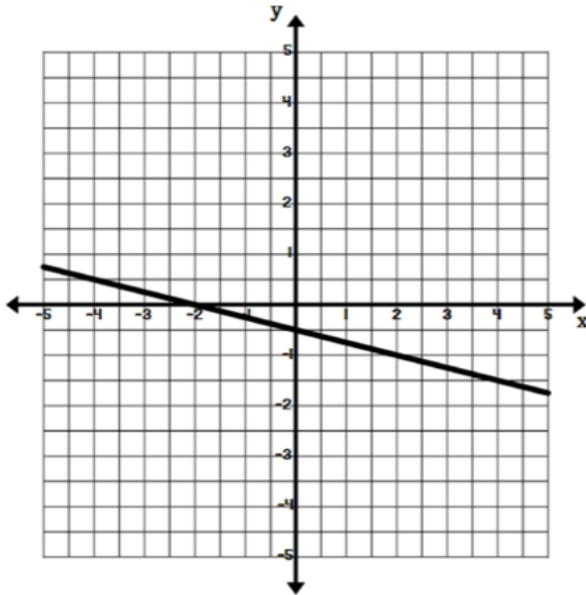


1. What is the positive solution to this equation  $3x^2 - 30x = 168$  ?

Answer : \_\_\_\_\_

2. The graph of a linear function is shown on the grid:



Which equation is best represented by this graph ?

- A.  $y + 3 = \frac{-1}{4}(x + 8)$
- B.  $y + 3 = \frac{-1}{4}(x - 8)$
- C.  $y - 3 = \frac{-1}{4}(x + 8)$
- D.  $y - 3 = \frac{-1}{4}(x - 8)$

3. What is the solution to:  
 $6(4r + 2) = 3(36 - 2r)$

Answer : \_\_\_\_\_

4. What is the value of  $x$  in the solution to this system of equations?

$$\begin{aligned} -8x + 4y &= 38 \\ y &= 4x + 15 \end{aligned}$$

- F. 2.75                      H. 4
- G. -4                        J. -2.75

5. Which function is equivalent to  $y = 3(x + 2)^2 - 18$  ?

- A.  $y = 3x^2 + 6x - 18$
- B.  $y = 3x^2 - 18$
- C.  $y = 3x^2 + 12x - 6$
- D.  $y = 3x^2 - 12$

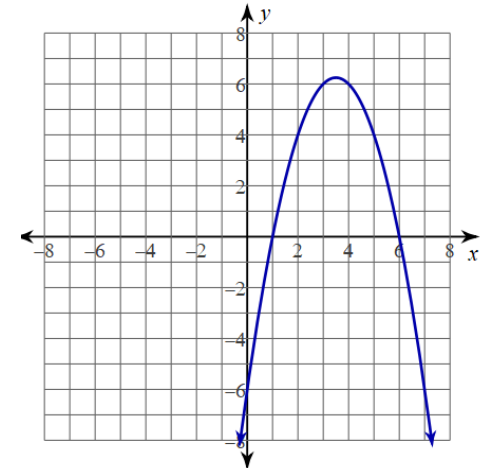
6. What is the slope of the graph  $y - 3 = \frac{1}{2}(x + 2)$  ?

- F.  $\frac{1}{2}$             G.  $-\frac{3}{2}$             H. 2            J.  $\frac{2}{3}$

7. Which expression is equivalent to  $(12 - 5n + 7n^2) - (-9 - 8n + 3n^2)$  ?

- A.  $10n^2 + 3n + 3$
- B.  $4n^2 - 13n + 21$
- C.  $10n^2 - 13n + 3$
- D.  $4n^2 + 3n + 21$

8. The graph of a quadratic function is shown on the grid:



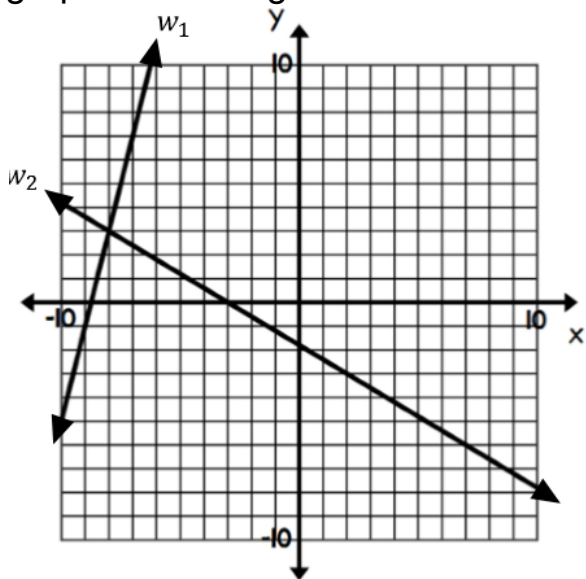
Which function is best represented by this graph

- F.  $g(x) = -x^2 + 7x - 6$
- G.  $g(x) = -x^2 - 7x - 6$
- H.  $g(x) = x^2 + 7x + 6$
- J.  $g(x) = x^2 - 7x + 6$

9. Which value of  $x$  makes the equation  $15 = 3(\frac{4}{3}x - 2)$  true?

- A. 5.25    B. -2    C. 15    D. 4

10. A system of equations is graphed on the grid



Which system of equations does the graph represent ?

- F.  $4x - y = -35$     H.  $x - 5y = -23$   
 $3x + 5y = -9$      $x + y = 5$
- G.  $4x - 3y = 41$     J.  $x + y = -5$   
 $x - y = -11$      $2x + 3y = 7$

11. Which function is equivalent to:  $p(x) = x^2 - 10x + 24$  ?

- A.  $p(x) = (x - 1)(x - 24)$   
 B.  $p(x) = (x + 2)(x + 12)$   
 C.  $p(x) = (x - 3)(x - 8)$   
 D.  $p(x) = (x - 6)(x - 4)$

12. Which value of  $x$  is a solution to this equation  $3x^2 - 15x + 12 = 0$  ?

- A.  $x = 4$     C.  $x = -1.5$   
 B.  $x = -4$     D.  $x = 1.5$

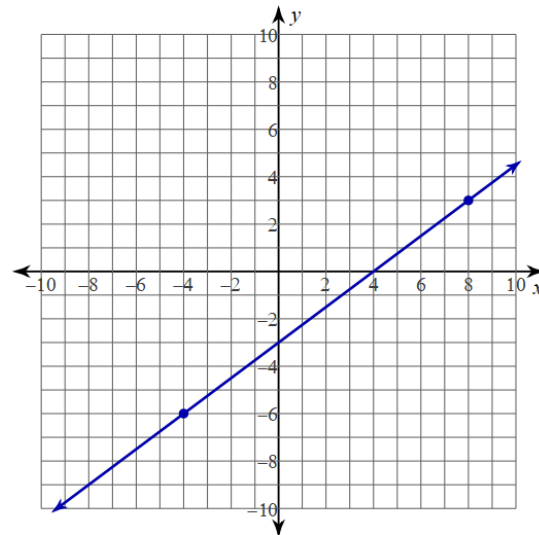
13. Which expression is equivalent to  $\frac{ab^7a^5}{b^3}$  ?

- F.  $\frac{a^5}{b^4}$     H.  $a^6b^4$   
 G.  $a^5b^{10}$     J.  $a^4b^4$

14. Which equation in slope intercept form that passes through points  $(-10, -9)$  and  $(15, 6)$  ?

- A.  $y = 0.5x - 4$     C.  $y = 3x + 21$   
 B.  $y = -0.6x - 12$     D.  $y = 0.6x - 3$

15. The graph of a linear function is shown on the grid.



What is the rate of change of  $y$  with respect to  $x$  for this function?

Answer : \_\_\_\_\_

16. The table shows a linear relationship between  $x$  and  $y$ .

<b>x</b>	<b>-15</b>	<b>-12</b>	<b>0</b>	<b>5</b>
<b>y</b>	<b>-4</b>	<b>-2.8</b>	<b>2</b>	<b>4</b>

What is the rate of change of  $y$  with respect to  $x$ ? Answer : \_\_\_\_\_.