

3. Solve the equation  $D = mg$  for  $m$ .

a.  $m = D - g$

b.  $m = g/D$

c.  $m = g - D$

d.  $m = D/g$

4. What is the factored form of  $3x^2 - 18x - 48$ ?

a.  $3(x^2 - 6x - 16)$

b.  $3(x + 2)(x - 8)$

c.  $3(3x^2 - 18x - 48)$

d.  $3(x - 2)(x + 8)$

5. The amount of pairs of shoes sold each day at a shoe store is represented by the function  $S(h) = 10 + 7h$ , where  $h$  is the time measured in hours and  $S$  is the amount of pairs of shoes sold. What is the meaning of the slope?

a. 7 pairs are sold each hour.

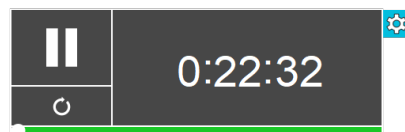
c. 17 shoes are sold each hour.

b. 10 pairs are sold each hour.

d. 70 pairs are sold each hour.

Warm-Up

Do page 2 #13-27 of EOC Review - calc  
inactive



13. Which point lies in the solution set for the following system of inequalities?

$x - y > 3$  and  $x + 2y < 6$

- A. (7, 1)
- B. (3, 4)
- C. (-2, 2)
- D. (4, -2)

$$\begin{aligned} 0) x - y > 3 & \quad x + 2y < 6 \\ 4 - (-2) > 3 & \quad 4 + 2(-2) < 6 \\ 6 > 3 \checkmark & \quad 4 - 4 < 6 \\ & \quad 0 < 6 \checkmark \end{aligned}$$

14. Determine the value of y for the system of equations.  $x - 3y = 4$  and  $2x + y = 8$

$$\begin{aligned} x - 3y &= 4 & \quad 2x + y &= 8 \\ -2x + 6y &= -8 & \quad -2x + y &= -8 \\ \hline 7y &= 12 & \quad y &= 0 \end{aligned}$$

15. An auditorium earned \$25,000 in sold-out concert ticket sales. Front section tickets cost \$75 per seat and back section tickets cost \$50 per seat. The number of front section seats is twice the number of back section seats. How many seats are in the front section?

$$\begin{aligned} x = \text{front} & \quad 75x + 50y = 25000 & \quad 75(2y) + 50y &= 25000 \\ y = \text{back} & \quad x = 2y & \quad 150y + 50y &= 25000 \\ & & \quad 200y &= 25000 \\ & & \quad y &= 125 \text{ back} \end{aligned}$$

$x = 2y$   
 $2(125)$   
 $250$  Front

16. Sam has a total of 58 DVD's and CD's. If the number of CD's is two more than three times the number of DVD's, how many CD's does he have?

$$\begin{aligned} x + y &= 58 \\ y &= 3x + 2 \\ \hline x + 3x + 2 &= 58 \\ 4x + 2 &= 58 \\ -2 & \quad -2 \\ \hline 4x &= 56 \\ x &= 14 \text{ DVD} \end{aligned}$$

$y = 3x + 2$   
 $3(14) + 2$   
 $44$  CDs

17. The length of each side of a square wooden box, in inches, is represented by the expression  $8m^2$ . The volume of the box, in cubic inches, is  $(8m^2)^3$ . Simplify this expression.

$8^3 m^6$  or  $512 m^6$

18. Easton simplified the following expression:  $(x^2 y^6 z^5)(x^4 y^5 z^3) = x^b y^11 z^8$

If he writes his answer in the form of  $x^a y^b z^c$ , what is the value of  $b$ , the exponent on  $y$ ?

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19. A concert hall is in the shape of a rectangle. Its floor has a length of  $(x + 6)$  meters and a width of  $(2x - 3)$  meters. The expression below represents the area of the floor of the hall in square meters.

$(x + 6)(2x - 3)$ . Simplify this expression.

$(x+6)(2x-3)$   
 $2x^2 - 3x + 12x - 18$   
 $2x^2 + 9x - 18$

20. Factor the following  $16a^2 - 49$ .

$(4a+7)(4a-7)$

21. Simplify:  $48xy^2 + 24xy^4 - 12x^2y^4$ .

$12xy^2(4 + 2y^2 - xy^2)$

22. What is the value of  $x$  in:

$\frac{x+8}{5x-2} = \frac{3}{8}$

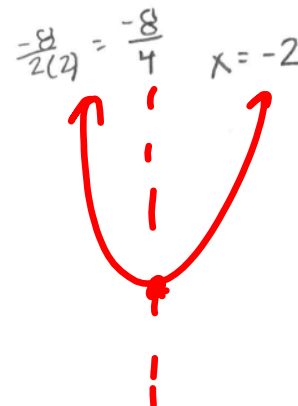
$8(x+8) = 3(5x-2)$   
 $8x + 64 = 15x - 6$   
 $-8x + 6 \quad -8x + 6$   
 $70 = 7x$   
 $10 = x$

23. Given the following:  $y = 2x^2 + 8x + 7$

a. What is the axis of symmetry?  $x = \frac{-b}{2a}$

b. What is the vertex?  $(-2, -1)$

c. What is the y-intercept?  $(0, 7)$



24. Based on the graph of,  $x^2 - 2x - 3$ , what is the positive x- intercept?

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25. One solution of the equation  $3x^2 - 16x + 5 = 0$  is  $1/3$ . What is the other solution?

$$(3x-1)(x-5)$$

$$x = \frac{1}{3} \quad x = 5$$

26. What are the solutions to:  $6x^2 = 18x$ ?

$$6x^2 - 18x = 0$$

$$6x(x-3) = 0$$

$$6x = 0$$

$$x = 0 \quad x = 3$$

27. The height in meters of a projectile can be modeled  $h = -4.9t^2 + vt + s$  where  $t$  is the time (in seconds) the object has been in the air,  $v$  is the initial velocity (in meters per seconds) and  $s$  is the initial height (in meters). A soccer ball is kicked upward from the ground and flies through the air with an initial vertical velocity of 4.9 meters per second. Approximately, after how many seconds does it land?

$$-4.9t^2 + 4.9t = 0$$

$$-4.9t(t-1) = 0$$

$$1 \text{ sec.}$$

## Quizizz EOC Review