

Agenda for Today 2/11/2021

1. Spiral Warm-Up - 10 minutes
2. Review for Unit 2A Test
3. Complete HW on deltamath
4. Complete HW on edpuzzle.com
 - Literal Equations
 - Dimensional Analysis
 - Rational & Irrational Numbers
 - All other videos on edpuzzle!

Literal Equations

5. Solve the equation for w: $p = 2l + 2w$

$$p = 2l + 2w$$

$$p - 2l = 2w$$

$$\frac{p - 2l}{2} = w$$

$$\frac{p}{2} - \frac{2l}{2} = w$$

$$\frac{p}{2} - l = w$$

6. Solve the equation for a: $\frac{a}{2} - 1 = b$

$$\frac{a}{2} - 1 = b$$

$$\frac{a}{2} = b + 1$$

$$a = 2(b + 1)$$

Practice

Your Turn:

7. Solve the equation for y: $6x - 3y = 15$

$$6x - 3y = 15$$

$$\frac{-3y}{-3} = \frac{-6x + 15}{-3}$$

$$y = 2x - 5$$

Solve for m:

$$y = mx + b$$

$$\frac{y - b}{x} = \frac{mx}{x} = m$$

Practice - We Do

1. You are visiting a foreign county over the weekend. The forecast is predicted to be 30 degrees Celsius. Are you going to pack warm or cold clothes? Use Celsius = $\frac{5}{9}(F-32)$.

$$(a) 30 = \frac{5}{9}(F-32)$$

$$270 = 5(F-32)$$

$$270 = 5F - 160$$

$$270 + 160 = 5F$$

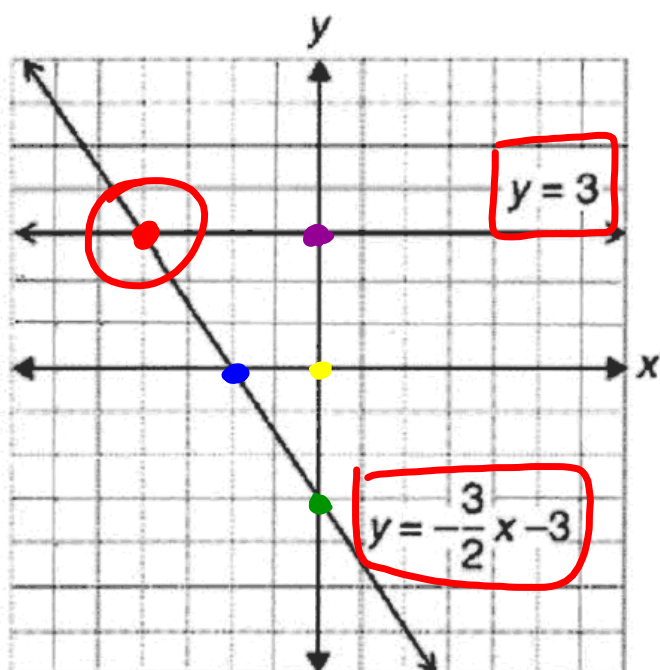
$$\frac{430}{5} = \frac{5F}{5}$$

$$86 = F$$

Practice
with
C = 20,
15, 10

Systems of Equations - Graphing

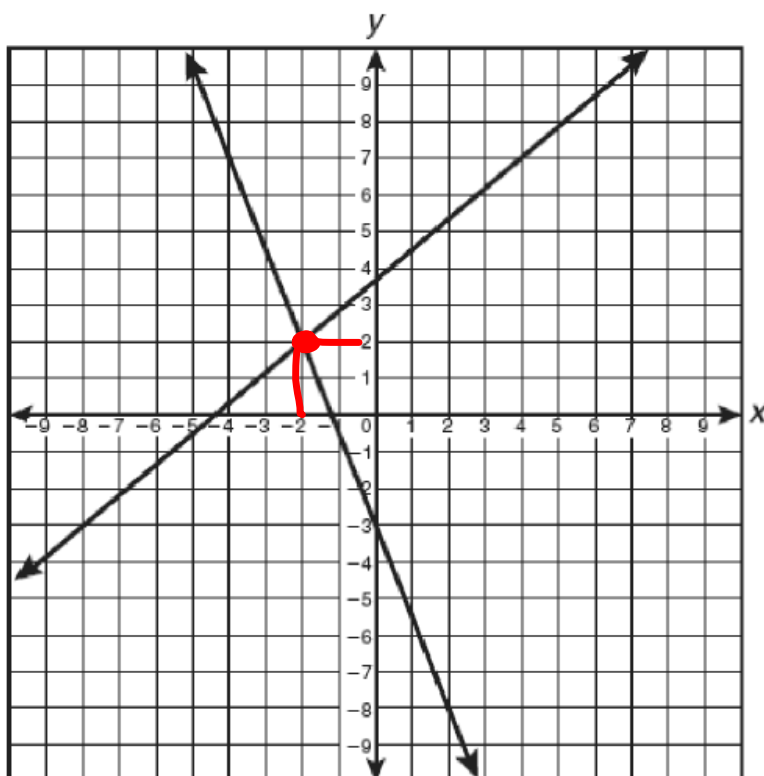
1. Which point best represents the solution to the system of linear equations shown in the graph below?



- A. $(-4, 3)$ B. $(3, -4)$
 C. $(4, -3)$ D. $(-3, 4)$

Systems of Equations - Graphing

2. What is the apparent solution to the system of equations graphed below?



A. $(-2, -2)$

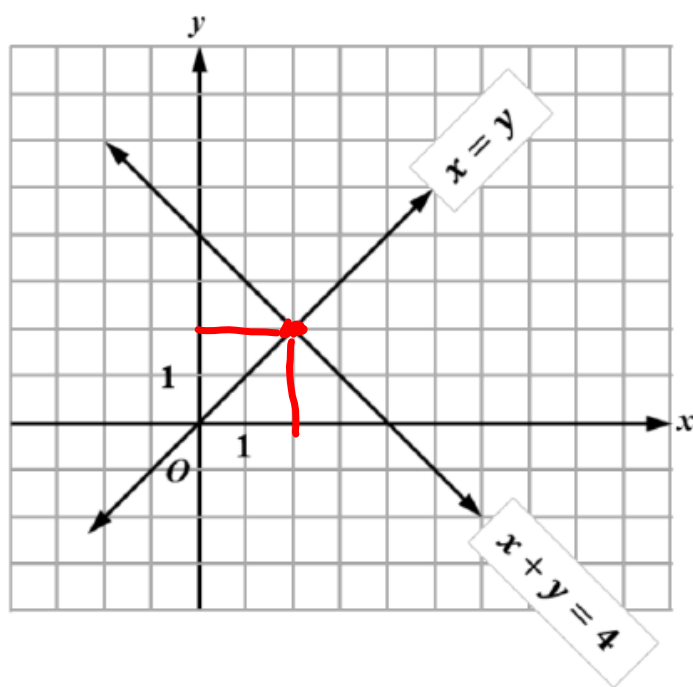
B. $(-2, 2)$

C. $(2, -2)$

D. no solution

Systems of Equations - Graphing

3.

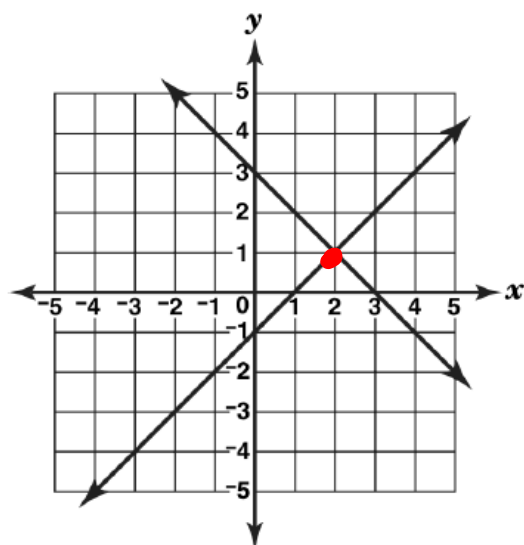


Which point is the solution to both equations shown on the graph above?

- A. (0, 0) B. (0, 4) C. (1, 1) **D. (2, 2)**

Systems of Equations - Graphing

4.



Which of these statements describes the relationship between the two lines?

- A. They intersect at the point (2, 1).
- B. They intersect at the point (1, 2).
- C. They intersect at the point (1, 0).
- D. They intersect at the point (0, 3).

Systems of Equations - Substitution

5. What is the y-value of the solution to the following system of linear equations?

$$\begin{aligned}y &= x + 8 \\x + 2y &= 1\end{aligned}$$

$$\begin{aligned}y &= -5 + 8 \\y &= 3\end{aligned}$$

- A. -7 B. -5 C. 3 D. 13

$$x + 2(x + 8) = 1$$

$$x + 2x + 16 = 1$$

$$3x + 16 = 1$$

$$3x = 1 - 16$$

$$\frac{3x}{3} = \frac{-15}{3}$$

$$x = -5$$

Systems of Equations - Elimination

6.
$$\begin{cases} 7x + 3y = -8 \\ -4x - y = 6 \end{cases} \times 3$$

What is the solution to the system of equations shown above?

A. $(-2, -2)$

B. $(-2, 2)$

C. $(2, -2)$

D. $(2, 2)$

$$\begin{array}{r} \cancel{7x + 3y = -8} \\ + (-12x - 3y = 18) \\ \hline -5x = 10 \\ \hline x = -2 \end{array}$$

$$\begin{array}{r} -4(-2) - y = 6 \\ 8 - y = 6 \\ -y = 6 - 8 \\ -y = -2 \\ \hline y = 2 \end{array}$$

Systems of Equations - Substitution

7.

$$\begin{cases} y = 3x - 5 \\ y = 2x \end{cases} \quad 3x - 5 = 2x$$

What is the solution of the system of equations shown above?

A. $(1, -2)$

B. $(1, 2)$

C. $(5, 10)$

D. $(-5, -10)$

Systems of Equations - Graphing

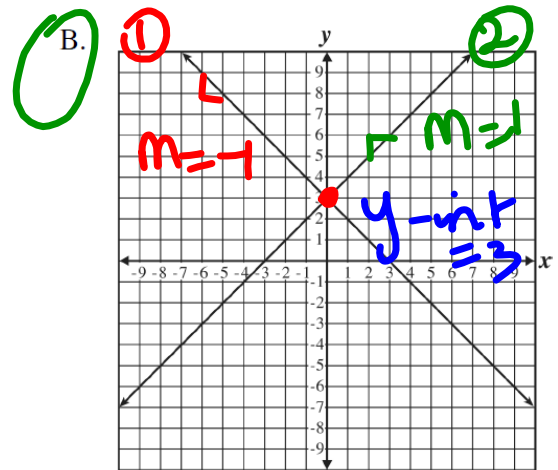
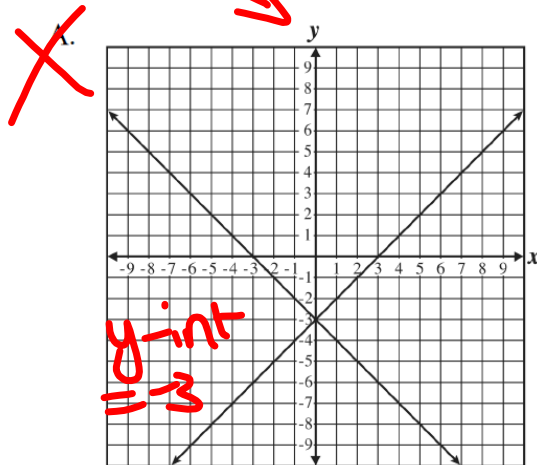


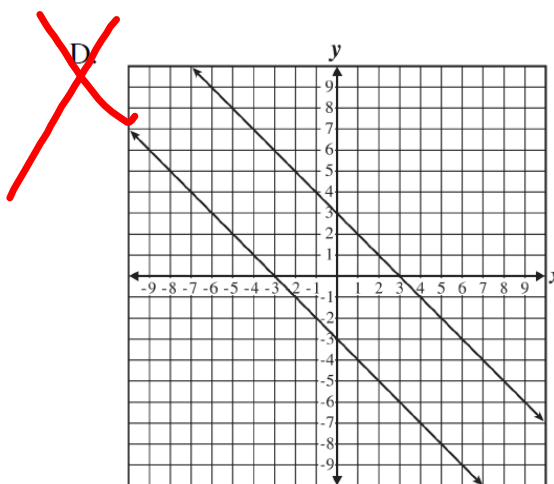
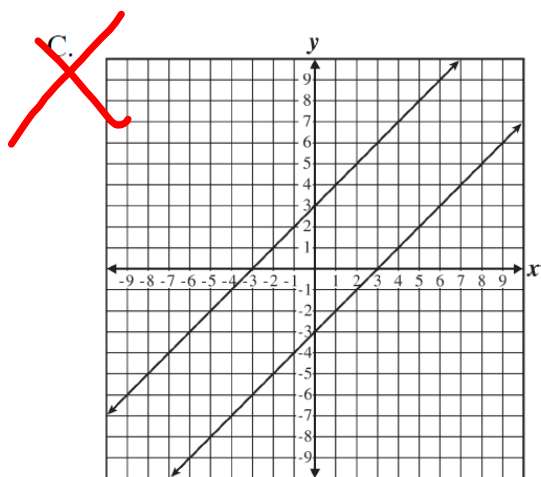
8. Which graph represents the system of equations shown below?

$m = -1$ $b = 3$

① $y = -x + 3$
 ② $y = x + 3$

$m = 1$ $b = 3$





Systems of Equations - Elimination

9. What is the x -coordinate of the solution to the following pair of equations?

$$\begin{array}{l} 2x + 3y = 7 \\ 3x - y = 5 \end{array} \quad \begin{array}{l} \\ \times 3 \end{array}$$

- A. -2 B. -1 C. 1 **D. 2**

Systems of Equations - Substitution

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

$$\begin{cases} y = -3x - 2 \\ 6x + 2y = -4 \end{cases} \quad 6x + 2(-3x - 2) = -4$$

A. (6, 2)

B. (1, -5)

C. no solution

D. infinitely many solutions

Word Problem

Ms. Ross told her class that tomorrow's math test will have 20 questions and be worth 100 points. The multiple choice questions will be 3 points each and the open ended response questions will be 8 points each. Determine how many multiple choice and open ended response questions are on the test.

$$\begin{array}{l} X = \text{MC questions} \quad y = \text{OR questions} \\ (X + y = 20) \quad \times -3 \\ 3x + 8y = 100 \end{array}$$

Use Elimination to solve

$$\begin{array}{r} -3x - 3y = -60 \\ + (3x + 8y = 100) \\ \hline \end{array}$$

$$\frac{5y}{5} = \frac{40}{5}$$

$$y = 8 \quad \text{Open Response questions.}$$

$$\begin{array}{r} X + y = 20 \\ + 8 \quad - 8 \\ \hline \end{array}$$

$$X = 12 \quad \text{MC questions}$$

$$\text{Solution} = (12, 8)$$

