

1. What is meant by a solution to an equation in two variables?

① A set of coordinates that makes the sentence true

② A point on the graph

2. Is  $(\frac{1}{2}, -2)$  a solution to  $6x - 2y = 7$ ? Explain how you know.

$$6(\frac{1}{2}) - 2(-2) = 7$$

$$3 - (-4) = 7$$

$$3 + 4 = 7$$

Yes.  $(\frac{1}{2}, -2)$  is a solution because it makes the sentence true.

3. Is  $(4, -2)$  a solution to  $y = 2x + 8$ ? Explain how you know.

$$-2 = 2(4) + 8$$

$$-2 = 8 + 8$$

$$-2 \neq 16$$

No.  $(4, -2)$  is not a solution because it does not make the sentence true.

Solve the following equations for  $y$ .

4.  $3x + 6y = -18$

$$\underline{+(-3x)} \quad \quad \quad \underline{+(-3x)}$$

$$\frac{6y}{6} = \frac{-3x + (-18)}{6}$$

$$y = \frac{-1}{2}x + (-3)$$

5.  $4y - 8x = 32$

$$4y + (-8x) = 32$$

$$\underline{+8x} \quad \underline{+8x}$$

$$\frac{4y}{4} = \frac{8x + 32}{4}$$

$$y = 2x + 8$$

6.  $\frac{1}{2}y - 3x = 2 + 2x$

$$\underline{+3x} \quad \underline{+3x}$$

$$2\left(\frac{1}{2}y\right) = (5x + 2)2$$

$$y = 10x + 4$$

7.  $5x + \frac{1}{3}y = -6$

$$\underline{+(-5x)} \quad \underline{+(-5x)}$$

$$3\left(\frac{1}{3}y\right) = (-5x + (-6))3$$

$$y = -15x + (-18)$$

Graph using a table.

8.  $y = 2x - 5$

Domain	Range	Solution
$x$	$y = 2x + (-5)$	$(x, y)$
-1	$y = 2(-1) + (-5)$ $y = -2 + (-5) = -7$	$(-1, -7)$
0	$y = 2(0) + (-5)$ $y = 0 + (-5) = -5$	$(0, -5)$
1	$y = 2(1) + (-5)$ $y = 2 + (-5) = -3$	$(1, -3)$
3	$y = 2(3) + (-5)$ $y = 6 + (-5) = 1$	$(3, 1)$

9.  $y = -2$

Domain	Range	Solution
$x$	$y = -2$	$(x, y)$
-2	$y = -2$	$(-2, -2)$
0	$y = -2$	$(0, -2)$
2	$y = -2$	$(2, -2)$
4	$y = -2$	$(4, -2)$

10.  $y = -\frac{2}{3}x + 1$

Domain	Range	Solution
$x$	$y = -\frac{2}{3}x + 1$	$(x, y)$
-3	$y = -\frac{2}{3}(-3) + 1$ $y = 2 + 1 = 3$	$(-3, 3)$
0	$y = -\frac{2}{3}(0) + 1$ $y = 0 + 1 = 1$	$(0, 1)$
3	$y = -\frac{2}{3}(3) + 1$ $y = -2 + 1 = -1$	$(3, -1)$
6	$y = -\frac{2}{3}(6) + 1$ $y = -4 + 1 = -3$	$(6, -3)$

11.  $x = 3$

Domain	Range	Solution
$x = 3$	$y$	$(x, y)$
$x = 3$	-2	$(3, -2)$
$x = 3$	0	$(3, 0)$
$x = 3$	2	$(3, 2)$
$x = 3$	4	$(3, 4)$

Sketch the graph using intercepts.

12.  $3x - 5y = 30$

$x$ -int:  $y = 0$        $y$ -int:  $x = 0$   
 $3x = 30$                $-5y = 30$   
 $x = 10$                  $y = -6$   
 $(10, 0)$                  $(0, -6)$

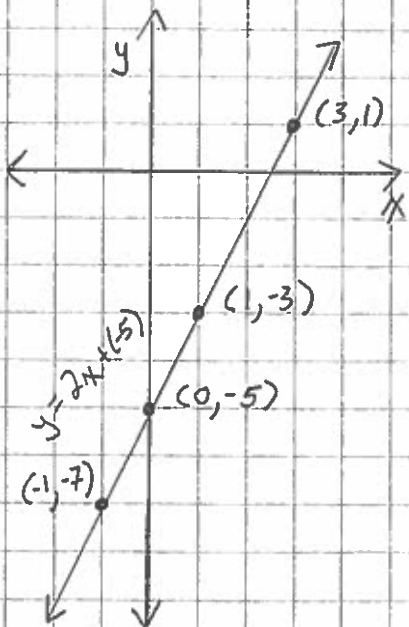
13.  $-6x + 3y = 24$

$x$ -int:  $y = 0$        $y$ -int:  $x = 0$   
 $-6x = 24$                $3y = 24$   
 $x = -4$                  $y = 8$   
 $(-4, 0)$                  $(0, 8)$

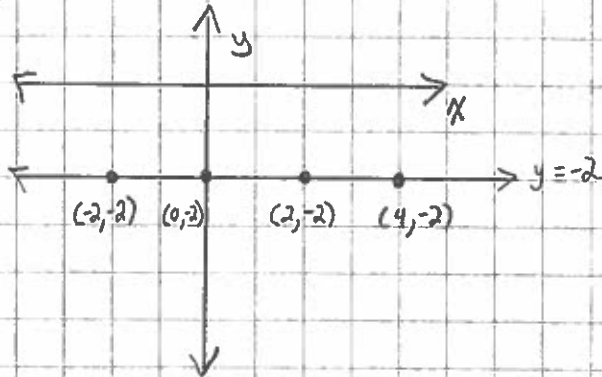
Key

# Chpt 4 Quiz Review - Graphs for # 8-13

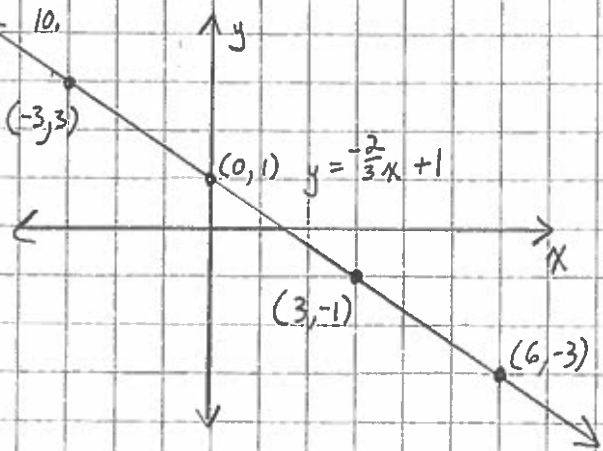
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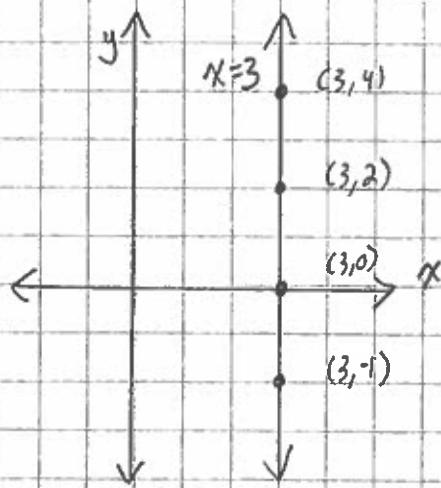
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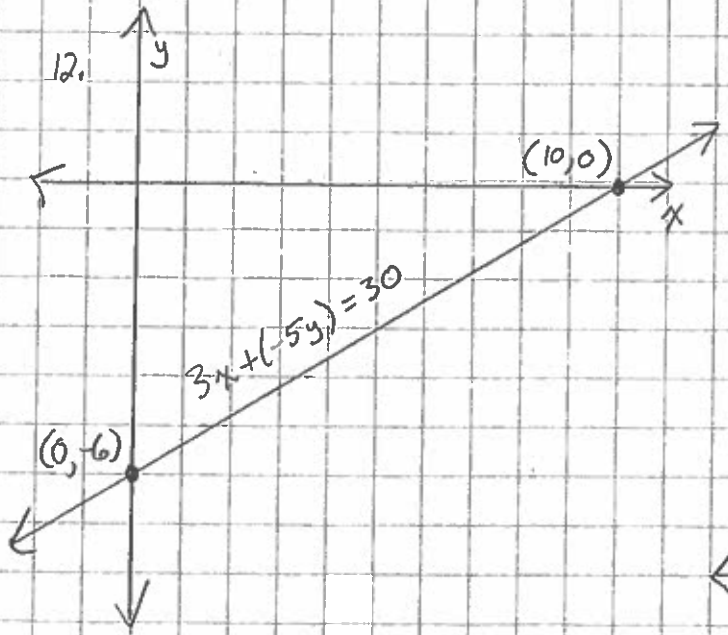
10.



11.



12.



13.

