CR Alg 1 **Sem 1 BONUS Extra Practice** Name Solutions

Slope	$m = \frac{y_2 - y_1}{x_2 - x_1}$
Slope-Intercept Form	$y = mx + b$

(h, k) form	$y = m(x - h) + k$
Arithmetic Sequence	$a_n = dn + a_0$
Absolute Value Function	$y = m\|x - h\| + k$

1. What is the solution for x in $2x + 1 = 4x + 1 - 2x$?

Combine

$2x + 1 = 2x + 1$

$-2x \quad -2x$

$1 = 1$

True

A. $x = 0$

B. no solution

C. $x = 4$

D. infinitely many solutions

2. Convert to slope-intercept Form: $6x - 3y = 24$

$-6x \quad -6x$

$\frac{-3y}{-3} = \frac{-6x}{-3} + \frac{24}{-3}$

A. $y = 2x - 8$ $y = 2x - 8$

B. $y = -2x - 8$

C. $y = -2x + 21$

D. $y = 19x$

3. A line has a slope of -4 and contains the point $(-3, 1)$. What is the equation of the line in (h, k) form?

m h k

A. ~~$y = -4(x + 1) + 3$~~ $y = m(x - h) + k$

B. $y = -4(x + 3) + 1$ $y = -4(x + 3) + 1$

C. ~~$y = 4(x + 3) - 1$~~

D. ~~$y = -4(x - 3) + 1$~~

4. Select the equation that has a slope of 5 and goes through the point $(2, -8)$ in slope intercept form.

m h k

$y = m(x - h) + k$

$y = 5(x - 2) - 8$

$y = 5x - 10 - 8$

$y = 5x - 18$

A. $y = 5x + 2$

B. $y = 5x + 16$

C. $y = 5x - 18$

D. $y = 5(x + 2) + 8$

5. What is the slope of a line passing through $(-3, 2)$ and $(7, -4)$

$x_1 \; y_1$ $x_2 \; y_2$

$m = \frac{-4 - 2}{7 - (-3)} = \frac{-6 \div 2}{10 \div 2} = -\frac{3}{5}$

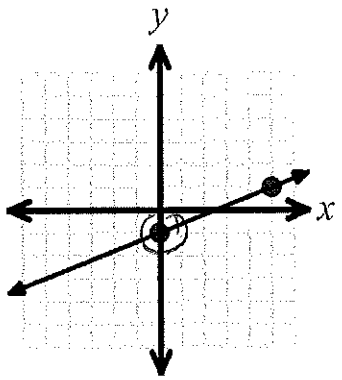
A. $-\frac{3}{5}$

B. $\frac{3}{5}$

C. $-\frac{1}{2}$

D. $\frac{1}{2}$

6. What is the equation of the line graphed to the right?



$m = \frac{rise}{run} = \frac{2}{5}$ $b = y\text{-int} = -1$ $y = mx + b$

A. $y = -1x + 5$

B. $y = \frac{2}{5}x - 3$

C. $y = \frac{2}{5}x - 1$

D. $y = -1x + 3$

7. What is the solution to this system?

$\begin{cases} y = 3x + 7 \\ y = 2x - 1 \end{cases}$

$3x + 7 = 2x - 1$ $-2x \quad -2x$

$x + 7 = -1$ $-7 \quad -7$

$x = -8$ → $y = 3(-8) + 7 = -24 + 7 = -17$

A. $(8, 31)$

B. $(-8, -17)$

C. $(7, -1)$

D. $(-2, -3)$

8. Which y-coordinate is in the solution to the system of equations?

$\begin{cases} 2x - 12y = 20 \\ 3x + 12y = -5 \end{cases}$

$2(3) - 12y = 20$ $-6 \quad -6$

$-12y = 14$ $-12 \quad -12$

$y = -1.16$

$5x = 15$ $\frac{5}{5} \quad \frac{15}{5}$

$x = 3$

A. $y = 15$

B. $y = 3$

C. $y =$ *no solution*

D. $y = -1.16$

9. Which of the following is the solution for x in the equation $|x + 2| - 5 = 11$?

$+5 \quad +5$

$|x + 2| = 6$

$x + 2 = 6$ $-2 \quad -2$ → $x = 4$

$x + 2 = -6$ $-2 \quad -2$ → $x = -8$

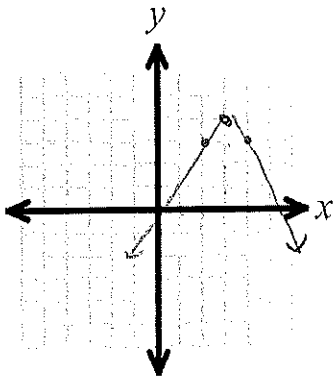
A. no solution

B. $x = 4$ and $x = -8$

C. $x = -18$

D. $x = 14$

10. Which statements below are true for $y = -|x - 3| + 4$? **Select all that apply.**



vertex $(3, 4)$ $m = \frac{-1}{1}$ ↓ ↪

A. The vertex is at $(3, 4)$.

B. The function is shaped like a V opening downward.

C. The domain is All Real Numbers.

D. The range is $y \leq 4$.

Answers and solutions are posted on https://www.washoeschools.net/Page/18023