## Algebra I Practice A.REI.C.6: Solving Linear Systems 2 www.jmap.org

Solve:

$$\begin{array}{rcl}
1. & 3x - 2y &=& 6 \\
y &=& x - 3
\end{array}$$

[A] no solution [B] 
$$\left(-3, -\frac{15}{2}\right)$$

$$[C](1,-2)$$

$$[D](0,-3)$$

$$2. \quad x - 2y = -5$$
$$y = 3x + 5$$

$$[A] (-1, 2)$$

[D] 
$$\left(2, \frac{7}{2}\right)$$

3. Solve the system using substitution.

$$4x + 4y = -2$$
$$y = -x$$

[A] no solution [B] 
$$\left(0, -\frac{1}{2}\right)$$

[C] 
$$(-5, 5)$$

[D] 
$$\left(-\frac{1}{2}, \frac{1}{2}\right)$$

4. Solve the system using substitution.

$$3x + 2y = -14$$
$$y = x + 3$$

[A] 
$$\left(-1, -\frac{11}{2}\right)$$

[B] no solution

$$[C] (-4, -1)$$

[D] 
$$(-3, 0)$$

5. Solve the system using substitution.

$$x + 4y = -19$$

$$y = 3x - 21$$

[A] 
$$\left(-6, -\frac{13}{4}\right)$$

[B] no solution

[C] 
$$(6, -3)$$

[D] 
$$(5, -6)$$

6. Solve the system using substitution.

$$x + 4y = -15$$

$$y = 3x - 20$$

[A] 
$$(6, -2)$$

[B] 
$$\left(-5, -\frac{5}{2}\right)$$

[D] 
$$(5, -5)$$

Solve the system by substitution:

7. 
$$x+4y = 8$$
  
 $-16y = 4x-32$ 

$$8. \quad x - 2y = -4 \\ 4x = 8y - 12$$

9. Which system has no solution?

$$[A] 4x-2y=1$$
$$y=2x-7$$

[B] 
$$3x - y = 3$$
$$y = -3x + 3$$

[C] 
$$y = 2x + 2$$
  
 $x - 2y = 1$ 

[D] 
$$y = 2x$$
  
 $2x + y = 1$ 

[E] 
$$y = -x + 1$$
$$x - y = 1$$

10. Compare the quantity in Column A with the quantity in Column B.

*x*-coordinates of the solution

$$\frac{\text{Column A}}{y = -2x} \qquad \frac{\text{Column B}}{y = x + 2}$$

$$x + y = 5 \qquad x + 2y = -11$$

- [A] The quantity in Column A is greater.
- [B] The quantity in Column B is greater.
- [C] The two quantities are equal.
- [D] The relationships cannot be determined on the basis of the information supplied.

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[1]	<u>D</u>
[2]	<u>A</u>
[3]	<u>A</u>
[4]	<u>C</u>
[5]	<u>D</u>
[6]	<u>D</u>
[7]	dependent (many solutions)
[8]	inconsistent (no solution)
[9]	<u>A</u>
[10]	<u>C</u>

- [2] <u>A</u>\_\_\_\_
- [3] <u>A</u>
- [4] <u>C</u>
- [5] D
- [6] D
- [7] dependent (many solutions)
- [8] inconsistent (no solution)
- [9] <u>A</u>
- [10] <u>C</u>