

①

$$\boxed{N} = \boxed{3D}$$

$$.05\underline{N} + .10D = 1.50$$

$$.05(\underline{3D}) + .10D = 1.50$$

$$.15D + .10D = 1.50$$

$$\frac{.25D}{.25} = \frac{1.50}{.25}$$

$$D = 6$$

$$N = 3(6) = 18$$

1. $x = \text{larger}$ $y = \text{smaller}$

$$\begin{aligned} x + y &= 21 \\ 3x &= 4y \\ \boxed{x} &= \boxed{21 - y} \end{aligned}$$

$$\begin{array}{r} x + y = 21 \\ -y - y \\ \hline x = 12 \end{array}$$

$$\begin{aligned} 3(21 - y) &= 4y \\ 63 - 3y &= 4y \\ + 3y &+ 3y \\ \hline 63 &= 7y \\ \frac{63}{7} &= \frac{7y}{7} \\ 9 &= y \end{aligned}$$

Quiz Review 6.1 to 6.4

Name: _____

Algebra 1

Period: _____ Date: _____

Complete problems 1 and 2 using Desmos:

1. Solve the following systems of equations:

a) $2x + 5y = 12$
 $5y = 4x + 6$

(1, 2)

b) $-3x - 4y = -7$
 $9x + 12y = 11$

No Solution

2. What is the difference of the x & y values in the solution to the system:

$5x + 4y = 32$

$9x - y = 33$

(4, 3)

$4 - 3 = 1$

3. Solve the following systems of equations using substitution:

a) $x = y + 3$
 $2x - y = 5$

$x = -1 + 3$
 $x = 2$

$2(y + 3) - y = 5$

$2y + 6 - y = 5$

$y + 6 = 5$
 $-6 -6$

$y = -1$
 $(2, -1)$

b) $6x + y = 4$
 $x - 4y = 19$

$y = 4 - 6x$
 $y = 4 - 6(1.4)$

$x - 4(4 - 6x) = 19$
 $x - 16 + 24x = 19$
 $25x = 35$
 $x = 1.4$

$y = 4 - 8.4$
 $y = -4.4$
 $(1.4, -4.4)$

c) $15x - 3y = 12$
 $y = 5x - 3$

$15x - 3(5x - 3) = 12$
 $15x - 15x + 9 = 12$
 $9 = 12$
 False

No Solution

4. Solve the following systems of equations using elimination:

a) $4x + y = 17$

$7y = 4x - 9$
 $-4x -4x$

$4x + 1 = 17$
 $-1 -1$

$4x = 16$
 $4 4$

$x = 4$

$4x + y = 17$
 $-4x + 7y = -9$

$8y = 8$
 $8 8$

$y = 1$

(4, 1)

b) $6x - 5y = 9$

$9x - 7y = 15$

$18x - 15y = 27$
 $-18x + 14y = -30$

$-1y = -3$
 $-1 1$

$y = 3$

$6x - 5(3) = 9$

$6x - 15 = 9$
 $+15 +15$

$6x = 24$
 $6 6$

$x = 4$

(4, 3)

