

Review Worksheet for Unit 2 Quiz #2

Name KEY Class Period _____

Determine if the given point is a solution to the system of equations:

$$-x + y = -2$$

$$2x + y = 10$$

1. $(-4, -2)$

NO

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

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

$$2 \neq -2$$

2. $(4, 2)$

$$-4 + 2 = -2$$

$$-2 = -2$$

$$2(4) + 2 = 10$$

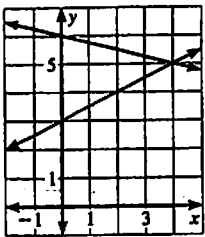
$$8 + 2 = 10$$

$$10 = 10$$

Use the graph to solve the linear system. Check your answer algebraically.

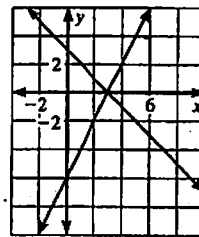
3. $-x + 2y = 6$
 $x + 4y = 24$

$(4, 5)$



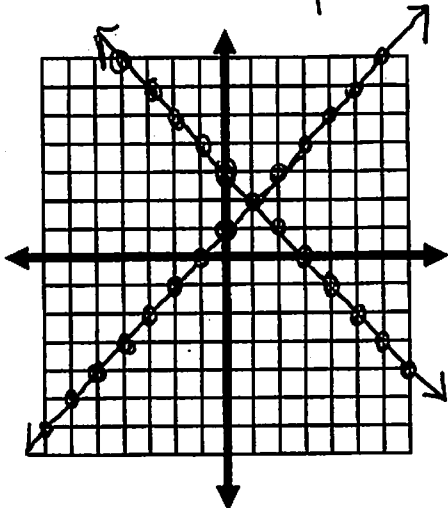
4. $x + y = 3$
 $-2x + y = -6$

$(3, 0)$

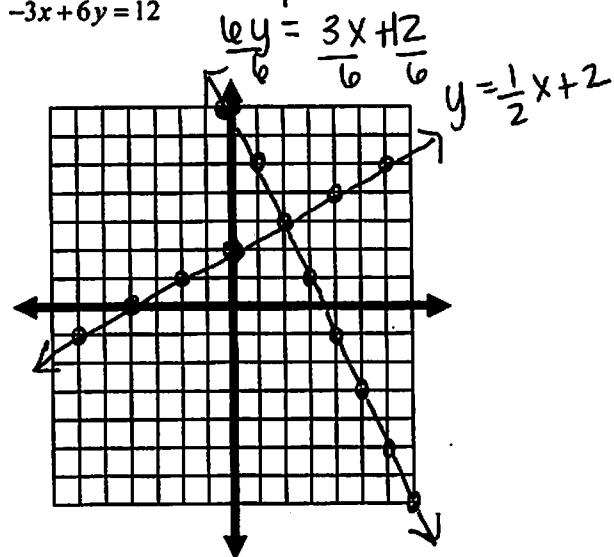


Find the solution of the linear system graphically. Write your solution in the blank provided.

$(1, 2)$ 5. $y = -x + 3$ $m = -\frac{1}{1}$ $b = 3$
 $y = x + 1$ $m = \frac{1}{1}$ $b = 1$



$(2, 3)$ 6. $y = -2x + 7$ $m = -\frac{2}{1}$ $b = 7$
 $-3x + 6y = 12$



Use substitution to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

(2, 2)₇. $y = 2x - 2$
 $6x + 2y = 16$
 $6x + 2(2x - 2) = 16$
 $6x + 4x - 4 = 16$
 $10x - 4 = 16$
 $10x = 20$
 $x = 2$

$y = 2(2) - 2$
 $y = 4 - 2$
 $y = 2$

(-2, -2)₈. $4x - y = -6$
 $y = 2x + 2$
 $4x - (2x + 2) = -6$
 $4x - 2x - 2 = -6$
 $2x - 2 = -6$
 $2x = -4$
 $x = -2$
 $y = 2(-2) + 2 = -4 + 2 = -2$
 $y = -2$

Use elimination to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

(2, 1)₉. $5x - 3y = 7$
 $x + 3y = 5$
 $6x = 12$
 $x = 2$
 $2 + 3y = 5$
 $3y = 3$
 $y = 1$

(1, -2)₁₀. $(-3x + 3y = -9) \cdot 2$
 $6x + 2y = 2$
 $-6x + 6y = -18$
 $8y = -16$
 $y = -2$
 $6x + 2(-2) = 2$
 $6x - 4 = 2$
 $6x = 6$
 $x = 1$

Use any method to solve the linear system. SHOW ALL WORK and write your solution in the space provided.

NO SOLUTION₁₁. Elimination
 $6x - 9y = 18$
 $(2x - 3y = 10) \cdot 3$
 $6x - 9y = 18$
 $-6x + 9y = -30$
 $0 = -12$

(-9, -7)₁₂. Substitution
 $x - 2y = 5$
 $x = 2y + 5$
 $3x - 5y = 8$
 $3(2y + 5) - 5y = 8$
 $6y + 15 - 5y = 8$
 $y + 15 = 8$
 $y = -7$
 $x = 2(-7) + 5 = -14 + 5 = -9$
 $x = -9$

Systems of Linear Equations Word Problems

13. Bill wants to buy some CDs at the music store. Used ones sell for \$4.99, and new ones sell for \$13.99. He has \$75 to spend that he got for his birthday. Write an equation for this scenario and decide if Bill can buy 4 used and 4 new CDs?

$4.99x + 13.99y = 75$
 $4.99(4) + 13.99(4) = 75$

$x = \text{Used CD's}$ $y = \text{New CD's}$
 $75.92 \neq 75$

NO he doesn't have enough money!

14. A store sold 32 pairs of jeans for a total of \$1050. Brand A sold for \$30 per pair and Brand B sold for \$35 per pair. How many of Brand A were sold?

$30x + 35y = 1050$
 $x + y = 32$

$x = \text{Brand A}$ $y = \text{Brand B}$
 14 pairs of Brand A
 18 pairs of Brand B

15. You are selling tickets for a basketball game. Student tickets cost \$3 and general admission tickets cost \$5. You sell 350 tickets and collect \$1450. How many of each type of ticket did you sell?

$3x + 5y = 1450$
 $x + y = 350$

$x = \text{Student ticket}$ $y = \text{general ticket}$
 150 student tickets
 200 general admission tickets