Systems of Equations Worksheet: Name:_____

1) Solve the system of linear equations.

$y = -x + 4$ $y = 2x - 8$

a) (4,0) b) (0,4) c) (-4,0) d) (0,-4)

2) Solve the system of linear equations.

$y = 4x + 6$ $y = 2x + 2$

a) (2,2) b) (2,-2) c) (-2,2) d) (-2,-2)

3) Solve the system of linear equations.

$2y = x + 3$ $2x + y = 4$

a) (2,1) b) (1,2) c) (-2,-1) d) (-1,-2)

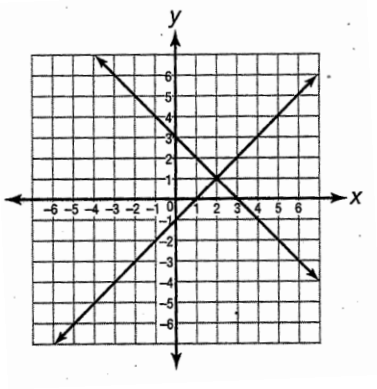
4) Which system of linear equations has NO solution?

a) $a - b = 2$, $b = -a - 3$ b) $a - b = 3$, $a + b = -2$ c) $-a + b = -2$, $b = a + 3$ d) $a + b = 3$, $-a + b = 2$

5) Which system of linear equations has infinitely many solutions?

a) $4x + 6y = 8$, $6x - 9y = 12$ b) $2x - 3y = 3$, $2/3x - y = 1$ c) $2x + y = 5$, $4x + 2y = 5$ d) $-2x - y = -1$, $4x - 2y = 2$

6) Which system of linear equations is graphed?



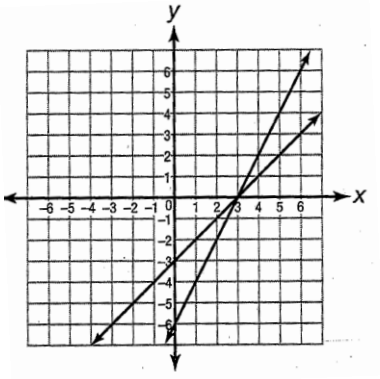
a) $y = x + 3$, $x + y = 1$ b) $y = -x + 3$, $x - y = 1$

c) $y = x - 3$, $x - y = 1$ d) $y = -3x$, $x + y = -1$

7) Which system of linear equations has only one solution?

a) $x + 2y = -1$, $2x + 5y = 0$ b) $3x - y = 9$, $6x - 2y = 6$ c) $y = 2x - 3$, $-4x + 2y = -6$ d) $x - y = 4$, $y = x + 4$

8) Which system of linear equations is graphed?



a) $x + y = 3$, $2x + y = -6$ b) $-3x + y = 3$, $2x - y = -6$

c) $-x - y + -3$, $2x + y = 3$ d) $-x + y = -3$, $2x - y = 6$

9) What is the solution of this system?

$y = x - 2$ and $x = 17 - 4y$

a) (5,3) b) (3,-5) c) (-3, -5) d) (-5,3)

10) Solve the system of equations.

$y = x + 5$ and $2y - x = 13$

a) (-3,-8) b) (-3,8) c) (3,-8) d) (3,8)

11) What is the solution of this system?

$8x + 3y = -9$ and $-8x + y = 29$

a) (3,-5) b) (3,5) c) (-3, -5) d) (-3,5)

12) Solve the system of equations.

$3x = y + 4$ and $x - y = 6$

a) (-7,-1) b) (-1,-7) c) (1,7) d) (7,1)

13) Which system has the solution (-3, -10)?

a) $x + y = 7$
$x + y = 19$

b) $x - y = 7$
$3x - y = -19$

c) $x - y = 7$
$3x + y = -19$

d) $x + y = -7$
$3x - y = 19$

14) Which system has NO solution?

a) $6x - 7y = 5$
$12x - 14y = 10$

b) $6x - 7y = 5$
$12x - 14y = -10$

c) $6x + 7y = 5$
$18x - 21y = 15$

d) $6x + 7y = 5$
$12x + 14y = 10$

15) Which system has infinitely many solutions?

a) $6x - 3y = 9$
$4x + 2y = 6$

b) $6x - 3y = 6$
$4x - 2y = 9$

c) $6x - 3y = 9$
$4x - 2y = 6$

d) $6x + 3y = 9$
$4x + 2y = 3$

16) The perimeter of a rectangle deck is 175 feet. The length of the deck, *l*, is 6 feet longer than 2 times the width, *w*. Which system of equations can be solved to determine the length and width, in feet, of the deck?

a) $2l + 2w = 175$
$l = 2 - 6w$

b) $2l + 2w = 175$
$l = 2w - 6$

c) $2l + 2w = 175$
$l = 6 - 2w$

d) $2l + 2w = 175$
$l = 6 + 2w$

- Solve for length and width of the deck: $l =$ $w =$

17) A number, *x*, is 11 less than 3 times a smaller number, *y*. The sum of the numbers is 24. Which system of equations can be solved to determine *x* and *y*?

a) x + y = 24
x = 3y – 11

b) x+ y = 24
x = 11 – 3y

c) x+ y = 24
x = 11 + 3y

d) x+ y = 24
x = (11 – 3)y

- Solve for x and y: x = y =

18) A box contains 22 coins consisting of quarters and dimes. The total value of the coins is $3.55. Which system of equations can be solved to determine the number of quarters, q, and the number of dimes, d, in the box?

a) d + q = 22
10d + 25q = 3.55

b) d + q = 22
.10d + .25q = 3.55

c) d + q = 3.55
10d + 25q = 22

d) d + q = 22
.10d + .25q = 355

- Solve for dimes and quarters: d = q =

19) Mr. Harris bought 4 hot dogs and 3 burgers for his family from a refreshment stand at the beach and paid $27. Ms. Sanders bought 7 hot dogs and 4 burgers for her family at the same refreshment stand and paid $41. Which system of equations can be solved to determine h, the price of a hotdog, and b, the price of a burger?

a) 4h + 3b = 27
7h – 4b = 41

b) 4h – 3b = 27
7h – 4b = 41

c) 4h + 3b = 27
7h + 4b = 41

d) 4h – 3b = 27
7h + 4b = 41

- Solve for cost of burgers and hotdogs: b = h =

20) Roland has 21 coins consisting of dimes and quarters. The number of dimes is 3 more than twice the number of quarters. Which system of equations can be solved to determine d, the number of dimes, and q, the number of quarters?

a) $d + q = 21$
$q = 2d + 3$

b) $d + q = 21$
$d = 2q + 3$

c) $d + q = 21$
$d = 2q - 3$

d) $d + q = 21$
$d = 3q + 2$

-Solve for number of quarters and dimes: q = d =

21) Kendra is considering enrolling in two acting schools. One school requires a registration fee of $75 and charges $18 per class. The other school requires a registration fee of $40 and charges $22 per class. Which system of equations can be used to determine how many classes she has to take before one school becomes a better deal?

a) $y = 18x + 75$
$y = 22x + 40$

b) $y = 18x - 75$
$y = 22x - 40$

c) $y = 75x + 18$
$y = 40x + 22$

d) $y = 75x - 18$
$y = 40x - 22$

- How many classes until one becomes a better deal? (answer in complete sentence!)

22) Manny has $2.30 in dimes and quarters. The total number of coins is 2 less than twice the number of dimes. Which system of equations can be solved to determine q, the number of quarters, and d, the number of dimes?

a) $.10d + .25q = 2.30$
$d + q = 2d + 2$

b) $.10d + .25q = 2.30$
$d + q = 2d - 2$

c) $.10d + .25q = 2.30$
$d + q = 2d$

d) $.10d + .25q = 2.30$
$d + q = 2 - 2d$

- Solve for number of quarters and dimes: q = d =

23) The Mendez family is going to the movies. Adult tickets cost $9 and children's tickets cost $6. There are 6 people in the family, and they spend a total of $48 on tickets. Which system of equations can be solved to determine a, the number of adult tickets, and c, the number of children's tickets?

a) $9a + 6c = 28$
$a + c = 6$

b) $9a + 6c = 28$
$a – c = 6$

c) $6a + 9c = 28$
$a + c = 6$

d) $6a + 9c = 28$
$a – 6 = c$

- Solve for the number of adults and children: a = c =

24) Gina bought 5 hot dogs and 3 soft drinks at the ball game for $11.50. Renaldo bought 4 hot dogs and 2 soft drinks for $8.50. How much does a single hot dog and a single drink cost?

a) hot dogs: $1.25
drinks: $1.50

b) hot dogs: $1.25
drinks: $1.75

c) hot dogs: $1.50
drinks: $1.25

d) hot dogs: $1.50
drinks: $1.75

25) The bookstore hopes to sell at least 30 binders and calculators each week. The store also hopes to have sales revenue of at least $200 in binders and calculators. How many binders and calculators could be sold to meet both of these sales goals if binders cost $3.65 a piece and calculators cost $14.80 a piece?

a) 25 binders
5 calculators

b) 22 binders
9 calculators

c) 12 binders
15 calculators

d) 28 binders
6 calculators