Name _____ Date _____

5.2 Extra Practice

In Exercises 1–8, solve the system by substitution. Check your solution.

1. $2x + 2y = 10$
$y = 5 + x$

2. $x - 3y = -1$
$x = y$

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

4. $3x + y = -5$
$4y - 8x = 20$

5. $7x + 7y = 21$
$2x + 4y = 8$

6. $7x - 4y = 8$
$25x - 5y = 10$

7. $y = \frac{3}{5}x - 12$
$y = \frac{1}{3}x - 8$

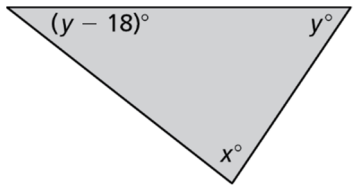
8. $4x - 8y = 3$
$8x + 4y = 1$

9. A food truck sells sandwiches and burritos. Each sandwich costs \$6.50 and each burrito costs \$9.25. The food truck sells a total of 100 items and earns a total revenue of \$820.50. How many of each item does the food truck sell?

10. An adult ticket to a museum costs \$3 more than a children's ticket. When 200 adult tickets and 100 children tickets are sold, the total revenue is \$2100. How much does each ticket cost?

11. Find the values of x and y.

$3x - 5y = -22$



12. Find the values of a and b so that the solution of the linear system is $(5, 2)$.

$$ax + by = 23$$
$$ax - by = 7$$

13. The difference of the digits of a two-digit number is 5. When the digits are reversed, the number decreases by 45. Find the original number.

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5.2 Review & Refresh

In Exercises 1 and 2, find the sum or difference.

1. $(6x - 8) + (x - 4)$

2. $4(2v - 3) - 5(4 - v)$

3. Solve the system by substitution.

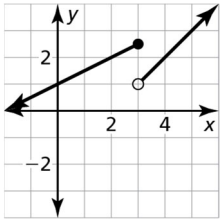
$$2x - y = 0$$
$$4x + 2y = 20$$

4. The theoretical probability of drawing a blue marble from a bag is $\frac{2}{3}$. The bag contains 15 marbles.

a. How many blue marbles are in the bag?

b. A marble is drawn from the bag and replaced 60 times. How many times do you expect a blue marble to be drawn?

5. Write a piecewise function represented by the graph.



6. Find the value of a so that the line that passes through $(-4, a)$ and $(4, -9)$ has a slope of $-\frac{3}{4}$.

7. Write an equation for the nth term of the arithmetic sequence shown. Then find a_{15}.

$$4, -1, -6, -11, \ldots$$

8. Graph $g(x) = |x + 3|$. Compare the graph to the graph of $f(x) = |x|$. Find the domain and range.

9. Solve the system $y = -\frac{1}{2}x + 3$ and $y = -2x - 3$ by graphing.

10. Solve $2|3x - 5| \leq 8$. Graph the solution.

11. You buy almonds and cashews. The almonds cost \$3.00 per pound and the cashews cost \$3.50 per pound. You buy a total of 2 pounds of almonds and cashews for \$6.25. How many pounds of each type of nut do you buy?

5.2 Self-Assessment

Use the scale to rate your understanding of the learning target and the success criteria.

1 I do not understand. 2 I can do it with help. 3 I can do it on my own. 4 I can teach someone else.

	Rating	Date
5.2 Solving Systems of Linear Equations by Substitution		
Learning Target: Solve linear systems by substitution.	1 2 3 4	
I can solve a system of linear equations by substitution.	1 2 3 4	
I can solve a linear equation in two variables for either variable.	1 2 3 4	
I can solve real-life problems using substitution.	1 2 3 4	