

# Algebra I

## 5.4 Worksheet #2

### Standard Form and Point-Slope Form

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_ HOUR: \_\_\_\_\_

#### DIRECTIONS:

Using the **standard form** of a linear equation, find the intercepts.

1.  $3x + 2y = 12$

$x$	$y$
0	0

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

$x$	$y$
0	0

3.  $10x - 3y = 30$

$x$	$y$
0	0

4.  $-2x + 3y = 12$

$x$	$y$
0	0

5.  $2x + y = 14$

$x$	$y$
0	0

6.  $7x + 3y = 21$

$x$	$y$
0	0

7.  $15x - y = -45$

$x$	$y$
0	0

8.  $9x + 2y = 36$

$x$	$y$
0	0

9.  $5x - 10y = -30$

$x$	$y$
0	0

10. Point-Slope Form of an Equation: \_\_\_\_\_

DIRECTIONS: Write an equation in point-slope form for the line that has the given slope and that contains the given point.

11. slope 7, (1, 8) \_\_\_\_\_ 12. slope 2, (4, 0) \_\_\_\_\_

13. slope 4, (7, 2) \_\_\_\_\_ 14. slope 5, (6, 3) \_\_\_\_\_

15. slope 3, (8, 4) \_\_\_\_\_ 16. slope 10, (5, 1) \_\_\_\_\_

17. slope  $\frac{2}{3}$ , (5, 6) \_\_\_\_\_ 18. slope  $-\frac{1}{4}$ , (7, -5) \_\_\_\_\_

19. slope 5, (-2, 8) \_\_\_\_\_ 20. slope -2, (3, 1) \_\_\_\_\_

**DIRECTIONS:** Write an equation in point-slope form for the line that contains each pair of points.

1.  $(2, 9), (1, 3)$  \_\_\_\_\_

2.  $(5, 22), (3, 12)$  \_\_\_\_\_

3.  $(9, 8), (4, 7)$  \_\_\_\_\_

4.  $(5, 8), (2, 2)$  \_\_\_\_\_

5.  $(5, 4), (7, 12)$  \_\_\_\_\_

6.  $(1, 3), (2, 8)$  \_\_\_\_\_

7.  $(7, 14), (4, 2)$  \_\_\_\_\_

8.  $(6, 4), (10, 20)$  \_\_\_\_\_

9. Katie has a lemonade stand where she sells each glass of lemonade for 25 cents and each cookie for 50 cents. The number of glasses of lemonade sold is represented by  $x$ , the number of cookies sold is represented by  $y$ , and her total sales are \$15.

a. Write an equation in standard form to model this situation. \_\_\_\_\_

b. If Katie sells 20 glasses of lemonade, how many cookies must she sell to reach her total of \$15? \_\_\_\_\_

10. A certain recreation area has miniature golf and a driving range. A round of golf,  $x$ , costs \$5 and a bucket of golf balls,  $y$ , is \$7. On an average day the total money brought in is \$700.

a. Write an equation in standard form to model this situation. \_\_\_\_\_

b. If 50 buckets are purchased, how many games of golf are played? \_\_\_\_\_

11. Jamal plans to lose weight for the state wrestling championships. He will lose 2 pounds each week. Suppose that after the fourth week of training he weighs 190 pounds. Write an equation in point-slope form that relates the number of weeks,  $x$ , to his weight,  $y$ . \_\_\_\_\_

12. Eric earns \$5 each week, and he adds this to money he has already saved. He has \$60 after 4 weeks of getting his allowance. Write an equation in point-slope form that relates the number of weeks,  $x$ , to his total amount of money,  $y$ . \_\_\_\_\_