Name: _____

3.5.D1 – POINT-SLOPE FORM OF LINEAR EQUATIONS

Past due on: _____ Period: _____
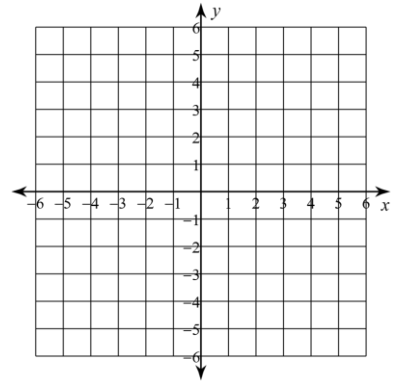
Graph the line described by each equation.

1. $y - 1 = -(x - 3)$
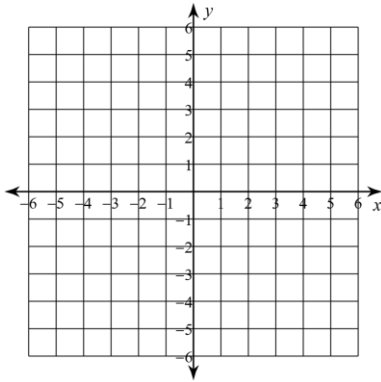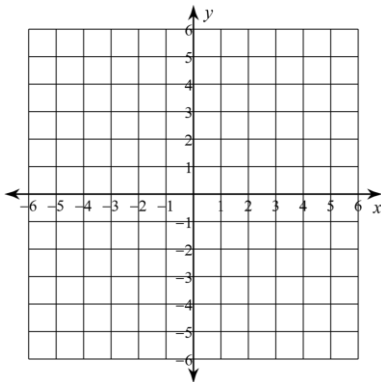
2. $y + 1 = -\dfrac{1}{2}(x + 4)$
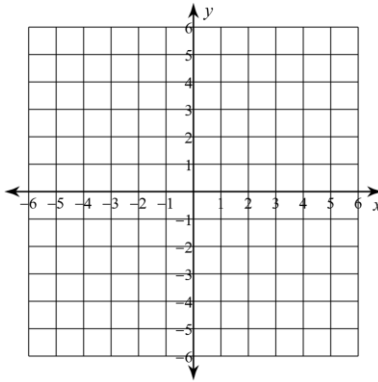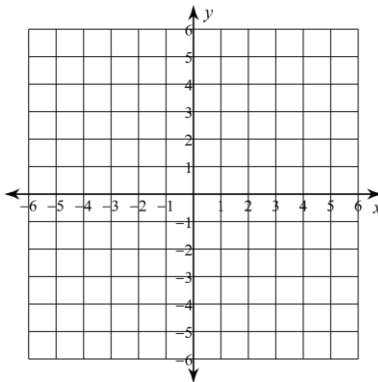
3. $y + 2 = \dfrac{3}{5}(x - 1)$

Graph the line described. Then write the equation of a line that passes through the given point and has the given slope. Then write the equation in slope-intercept form.
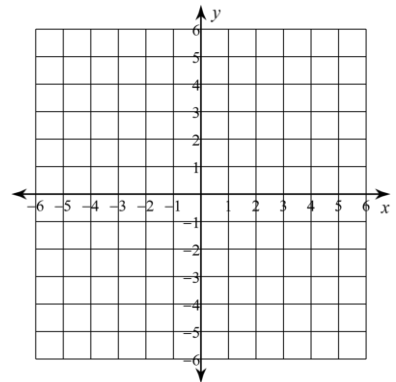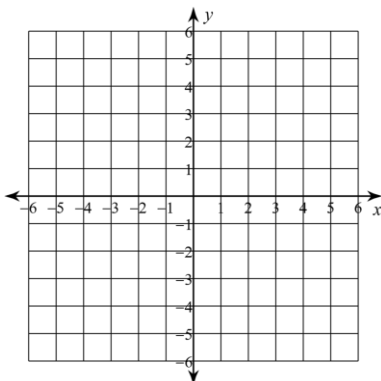
4. $(1, 5); m = -4$

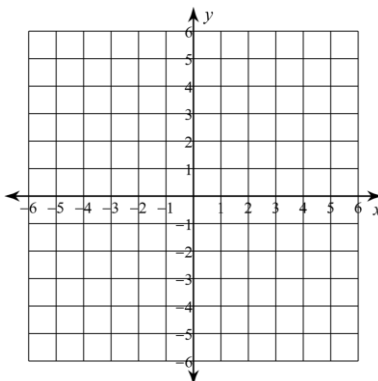5. $(-2, -6); m = \dfrac{1}{5}$

6. $(1, 1); m = 2$

Graph the line described. Then write the equation in slope-intercept form.
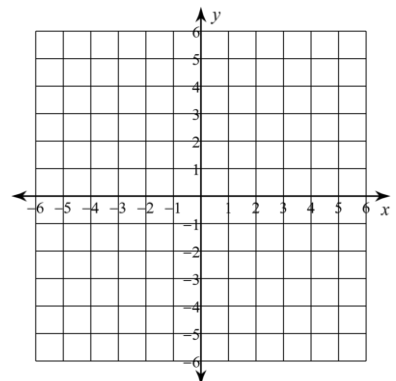
7. $m = \dfrac{3}{4}; y$ int: -4

8. $m = -\dfrac{2}{3}; y$ int: 5

9. $m = -3; y$ int: 2

Identify the independent and dependent quantities (including units) in each problem situation. Assign a variable to each quantity. Then write a function to represent the problem situation. *Refer to the 2.1 example "Identifying Dependent & Independent Quantities and Writing an Expression" in the Chapter 2 Summary.*

10. Helen is in a bicycle race. She has already biked 10 miles and is now biking at a rate of 18 miles per hour. Her distance is a function of time.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____

11. Paulina's health club has an enrollment fee of $175 and costs $35 per month. The total cost is a function of the number of membership months.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____

12. To rent a van, a moving company charges $30 plus $0.50 per mile. The cost is a function of the number of miles driven.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____

13. A caterer charges a $200 fee plus $18 per person served. The cost is a function of the number of guests.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____

14. A closet organizer charges a $100 initial consultation fee plus $30 per hour. The cost is a function of the number of hours worked.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____

15. Pat's Pizza charges $10.50 for a large cheese pizza plus $0.75 for each additional topping. The total cost is a function of the number of additional toppings.

    Independent quantity: _____ *Variable:* _____

    Dependent quantity: _____ *Variable:* _____

    Function: _____