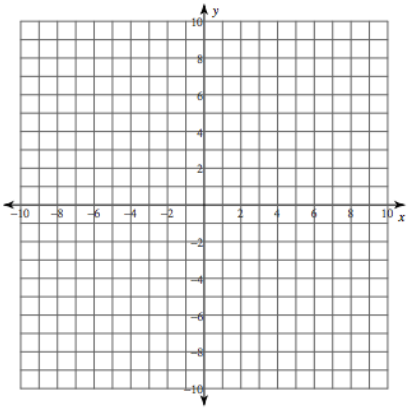
Name _____ Period _____

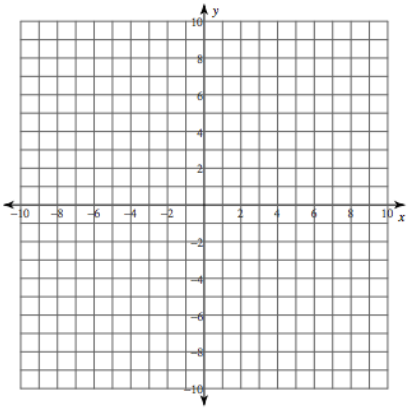
6-5 Practice Worksheet

Graph each equation.

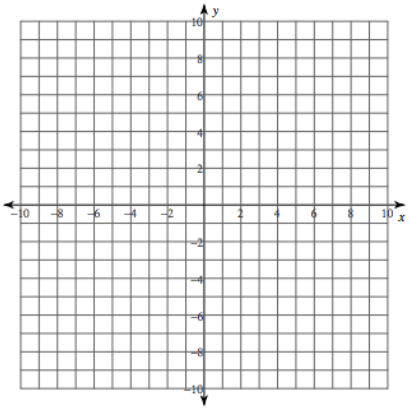
1. $y-2=\frac{1}{2}(x-3)$



2. $y-2=2(x+3)$



3. $y+4=(x-5)$



Write an equation in point-slope form for the line through the given point that has the given slope.

4. $(3,-4);m=6$

5. $(1,-8);m=-\frac{1}{5}$

6. $(-5,2);m=0$

Write an equation in (a) point-slope form, and (b) slope-intercept form for the line that passes through the given points.

7. $(-6,6),(3,3)$

8. $(5,3),(4,5)$

9. $(-8,4),(-4,-2)$

Is the relationship shown by the data linear? If so, model the data with an equation.

10.

x	y
3	1
6	4
9	13
15	49

11.

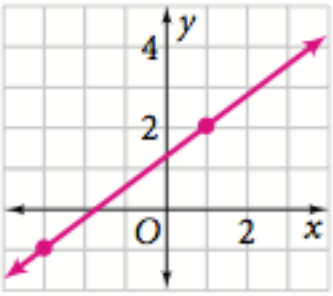
x	y
-10	-5
-2	19
5	40
11	58

12. ***(a)Use the data in the table to write an equation to relate the fine with the speed over the posted speed limit. (b) Rewrite the equation in slope-intercept form. (c) Write a sentence to explain what the slope and y-intercept mean in this situation.***

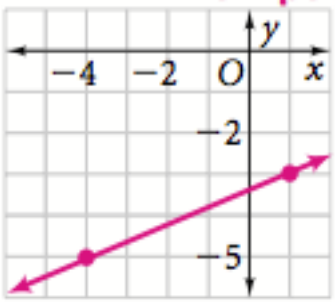
Speed Over Posted Speed Limit (mph)	Fine ($)
10	75
12	95
15	125
19	165

Write an equation of each line in points slope form AND slope-intercept form.

13.



14.



15. ***The relationship of degrees Fahrenheit (^{0}F) and degrees Celsius (^{0}C) is linear. When the temperature is 50^{0}F, it is 10^{0}C. When the temperature is 77^{0}F, it is 25^{0}C.***
(a) Write an equation giving the Celsius temperature C in terms of the Fahrenheit temperature F.
(b) What is the Celsius temperature when it is 59^{0}F?

16. ***Worldwide carbon monoxide emissions are decreasing about 2.6 million metric tons each year. In 1991, carbon monoxide emissions were 79 million metric tons. Use a linear equation to model the relationship between carbon monoxide emissions and time. Let x = 91 correspond to 1991.***

Write an equation in slope-intercept form of each line described below.

17. The line contains the point (-3, -5) and has the same slope as $y + 2 = 7(x + 3)$

18. The line contains the point (1, 3) and has the same y-intercept as $y - 5 = 2(x - 1)$

19. The line contains the point (2, -2) and has the same x-intercept as $y + 9 = 3(x - 4)$