Chapter 5, Practice Quiz 1

Lessons 5.1, 5.2, and 5.3

Name: _____

Date: _____ Hour: _____

Skills Assessed:

I can use slope-intercept form to write an equation of a line.
I can use slope and any point on a line to write an equation of the line.
I can write an equation of a line given two points on the line.
I can use a linear equation to model a real-world situation.

1) Write an equation for the line with a slope of $\frac{7}{8}$ and a y-intercept of 8. 1)_____

2) a) In mammals, the weight of the heart is approximately 0.005 of the total body weight. Write a linear model that gives the heart weight in terms of the total body weight. 2a)_____

b) Use the equation you wrote above to complete the table below.

	Human	**Cow**	**Elephant**	**Whale**
Total weight, x (in pounds)	150	1500	12,000	200,000
Heart weight, y (in pounds)				

3) a) A car rental company charges a flat fee of $31 and an additional $0.13 per mile to rent a compact car. Write an equation to model the total charge *y* (in dollars), in terms of *x*, the number of miles driven. 3a)_____

b) Use the equation you wrote above to complete the table below.

Miles, *x*	25	50	100	200
Cost, *y*				

4) Write an equation of the line that passes through the point (3, -6) and has the slope $m = \frac{1}{3}$. Write the equation in slope-intercept form. Show your work. 4)_____

5) Write an equation of the line that is parallel to the given line $y = -3x + 5$ and passes through the given point (-1, 4). Show work. 5)_____

6) You work as a dental assistant where you are given a $0.75 per hour raise each year. In year three (after two raises), you earn $9.50 per hour.

a) Write an equation that models your hourly wage, y, in terms of the number of years, *t*, since you started as a dental assistant. 6a)_____

b) What was your starting hourly wage as a dental assistant? 6b)_____

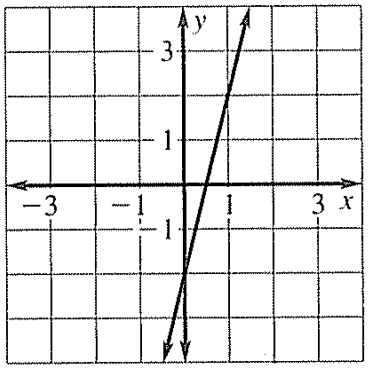
7) Write an equation in slope-intercept form that passes through the points (1, 6) and (3, -4) 7)_____

8) Give the slope of a line perpendicular to the given line with the equation $y = \frac{1}{3}x + 9$. 8)_____

9) You drove to your cousin's house, which is 460 miles away. After two hours, you had gone 100 miles. After 8 hours, you reached your destination. Write an equation that gives the number of miles you had driven, y, in terms of the number of hours you had driven, t. Show your work. 9)_____

For questions 10-12, write an equation in slope-intercept form the line shown in the graph.

10)



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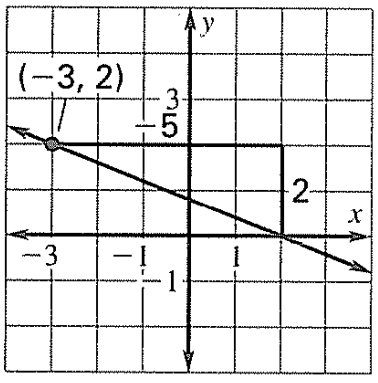
11)



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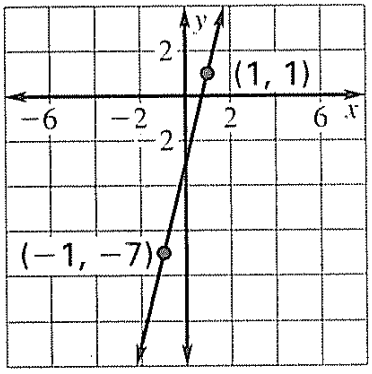
12)



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