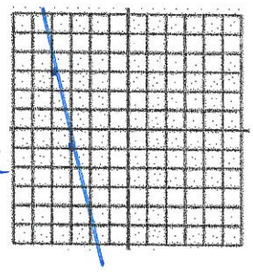
6.1-4 RWS

Graph Pro: All of my Algebra Students :)

#1-3, Find the slope of each.

1. (-3, -5) and (-5, -10) $\frac{5}{2}$

2. (1, -8) and (1,9) undefined

3.  $\frac{-4}{1}$

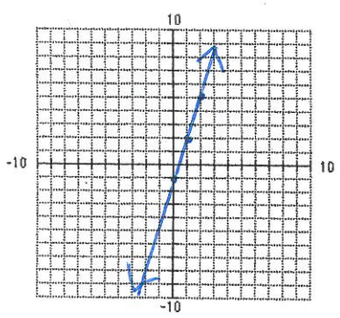
4. Describe what the *slope* of a line is: rate of change for line, steepness, rise compared to run.

5. The slope of the line through (4,2) and (*x*, -1) is 3. Solve for *x*. $x = 3$

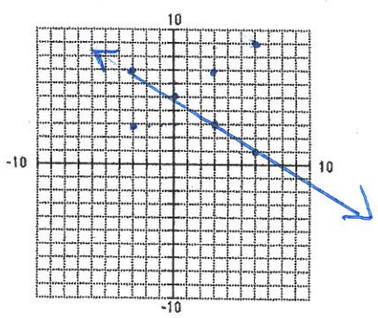
6. Put this equation into slope-intercept format: $5x - 2y = 10$ $-5x$ -2 $y = \frac{5}{2}x - 5$

#7-12, Graph each linear equation using *y = mx+b*.

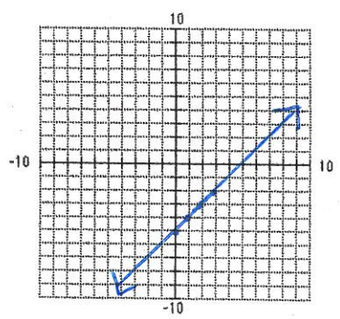
7. y = 3x - 1



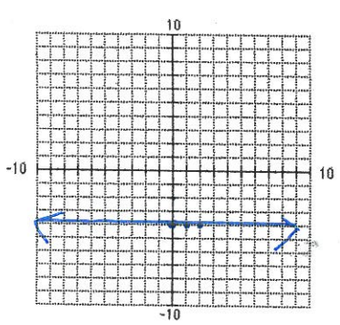
8. $y=-\frac{2}{3}x+5$



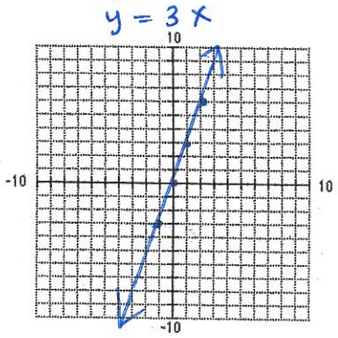
9. y = x -5



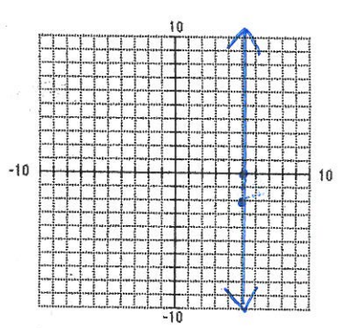
10. y = -4



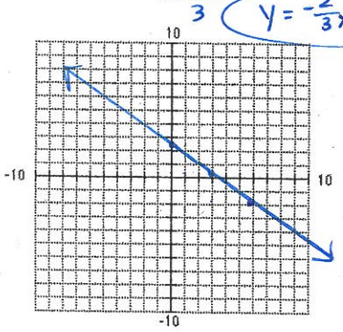
11. -3x + y = 0 $y = 3x$



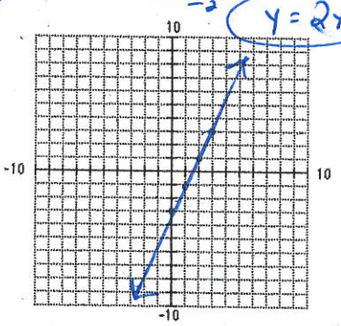
12. *x = 5*



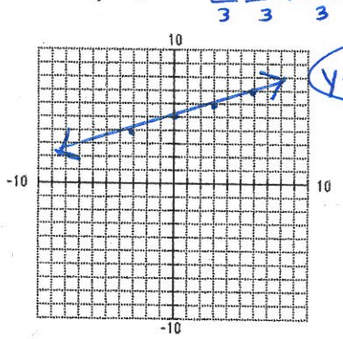
13. 2x + 3y = 7 $\frac{-2x}{3}$ $y = -\frac{2}{3}x + 2.33$



14. 4x - 2y = 6 $\frac{-4x}{-2}$ $y = 2x - 3$



15. 15 = 3y - x $\frac{15}{3} + \frac{x}{3} = \frac{3y}{3}$ $y = \frac{1}{3}x + 5$



16. The Knapp family is taking a vacation. They expect to pay $150 for someone to watch their pets while they are gone. They also expect to pay $100 per day for a hotel room and $80 per day food.

a. Write a simplified equation that represents this situation. $y = 180x + 150$

b. What is the slope of your equation? 180

c. What is the y-intercept? 150

17. In 2000, Vancouver, Washington had a population of 143,650 and was steadily growing 9700 per year.

a. Write an equation relating *y*, the population of Vancouver, to *x, the number of years since 2000.* $y = 9700x + 143,650$

b. Predict the population of Vancouver in 2015. $9700(15) + 143650$ $x = 15$

c. Predict the year the population will exceed 400,000. 289,150

$400,000 = 9700x + 143,650$

$y = 400,000$

The 27th year 2027