Review on 4.1-4.5

Put the equation in slope intercept form (y = mx + b).
Then identify the slope and y-intercept.

1) $2x + 3y = 9$

$\frac{3y}{3} = \frac{-2x+9}{3}$ $y = \frac{-2}{3}x + 3$

1) m = $-\frac{2}{3}$
b = 3

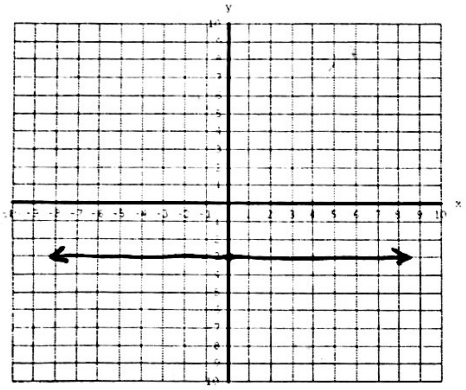
2) $2x - 3y = 12$

$\frac{-3y}{-3} = \frac{-2x+12}{-3}$
$y = \frac{2}{3}x - 4$

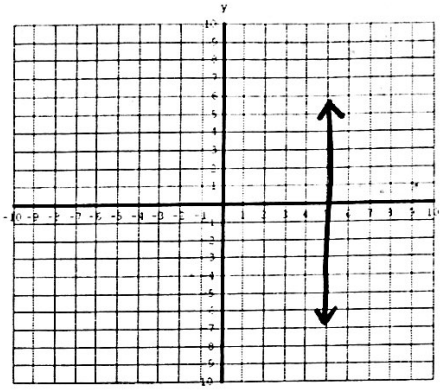
2) m = 2/3
b = -4

Sketch a graph of the line:

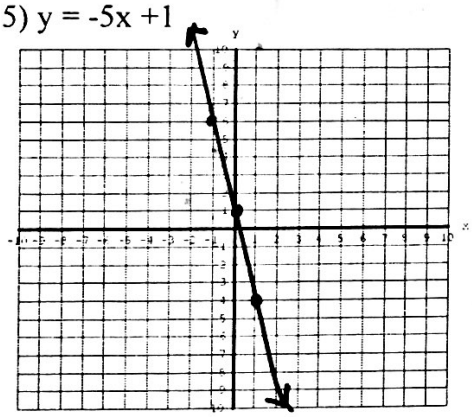
3) y = -3



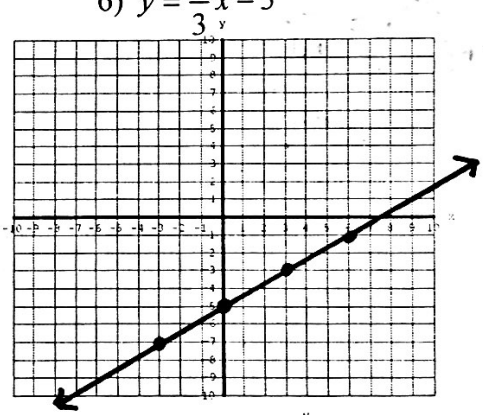
4) x = 5



5) y = -5x +1



6) $y = \frac{2}{3}x - 5$



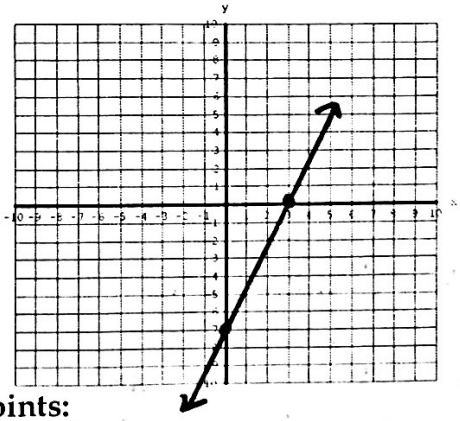
Find the x and y-intercepts of the line, then graph:

7) -7x + 3y = -21

x-int: (3, 0)
y-int: (0, -7)

y=0
$-7(x)+3(0)=-21$
$-7x=-21$
$x=3$

x=0
$-7(0)+3y=-21$
$\frac{3y}{3}=\frac{-21}{3}$ $y=-7$



Find the slope of the line that passes through the points:

8) (2, 8) (3, 12)

$\frac{12-8}{3-2} = \frac{4}{1}$

4

9) (-3 , -8) (-3, 4)

$\frac{-8-4}{-3+(+3)} = \frac{-12}{0}$

undefined

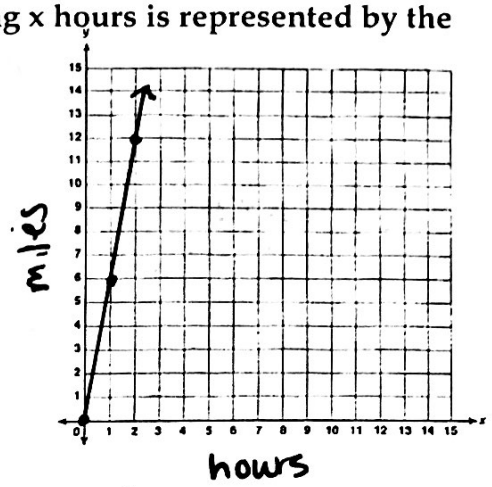
10) (-5, -5) (3, -5)

$\frac{-5+(+5)}{-5-3} = \frac{0}{-8}$

0

11) The distance your friend travels y (in miles) running x hours is represented by the equation y = 6x.

a) Graph the equation (don't forget to label)



b) Interpret the slope

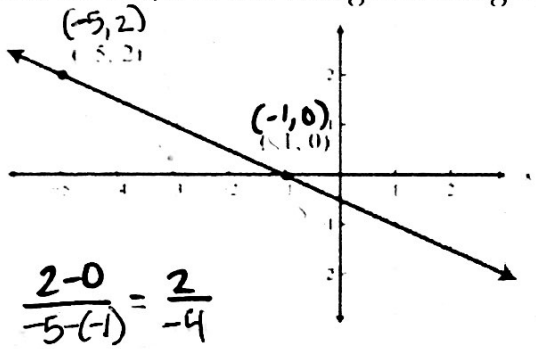
6 miles/hr

c) How many miles will you run in 1.5 hours?

$y = 6(1.5)$
$= 9$

9 miles

12) Find the slope of the line given the graph.



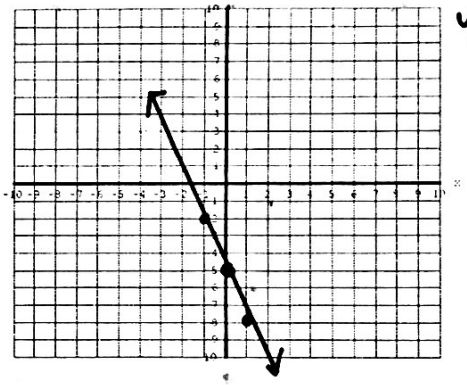
$\frac{2-0}{-5-(-1)} = \frac{2}{-4}$

$m = -\frac{1}{2}$

13) Graph using the slope and y-intercept. Solve for y first!

$-3x - y = 5$

$-y = 3x + 5$
$y = -3x - 5$



14) Your family is on a ski vacation. Lift tickets for the family cost $80 per day. Snowboard rentals cost $40 per day. You purchase lift tickets for *x* days and snowboard rentals for *y* days and spend $480.

a. Write an equation in standard form that represents the situation.

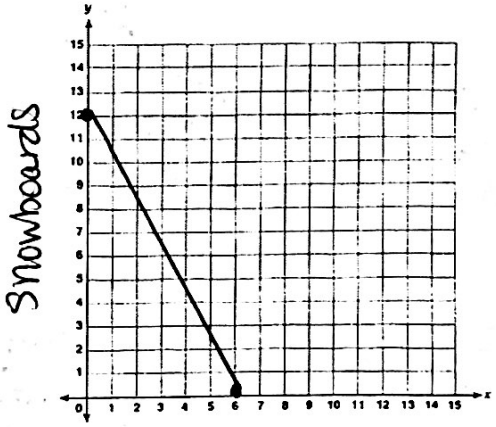
b. Graph the equation using the *x*- and *y*-intercepts.

c. You rent snowboards for 2 days. How many days did you purchase lift tickets?

a) $80x + 40y = 480$

b) $y = 0$
$\frac{80x}{80} = \frac{480}{80}$
$x = 6$

$x = 0$
$40y = 480$
$y = 12$



c) $y = 2$ $80x + 40(2) = 480$
$80x + 80 = 480$
$80x = 400$ $x = 5$

5days