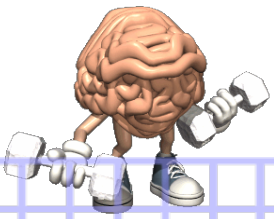
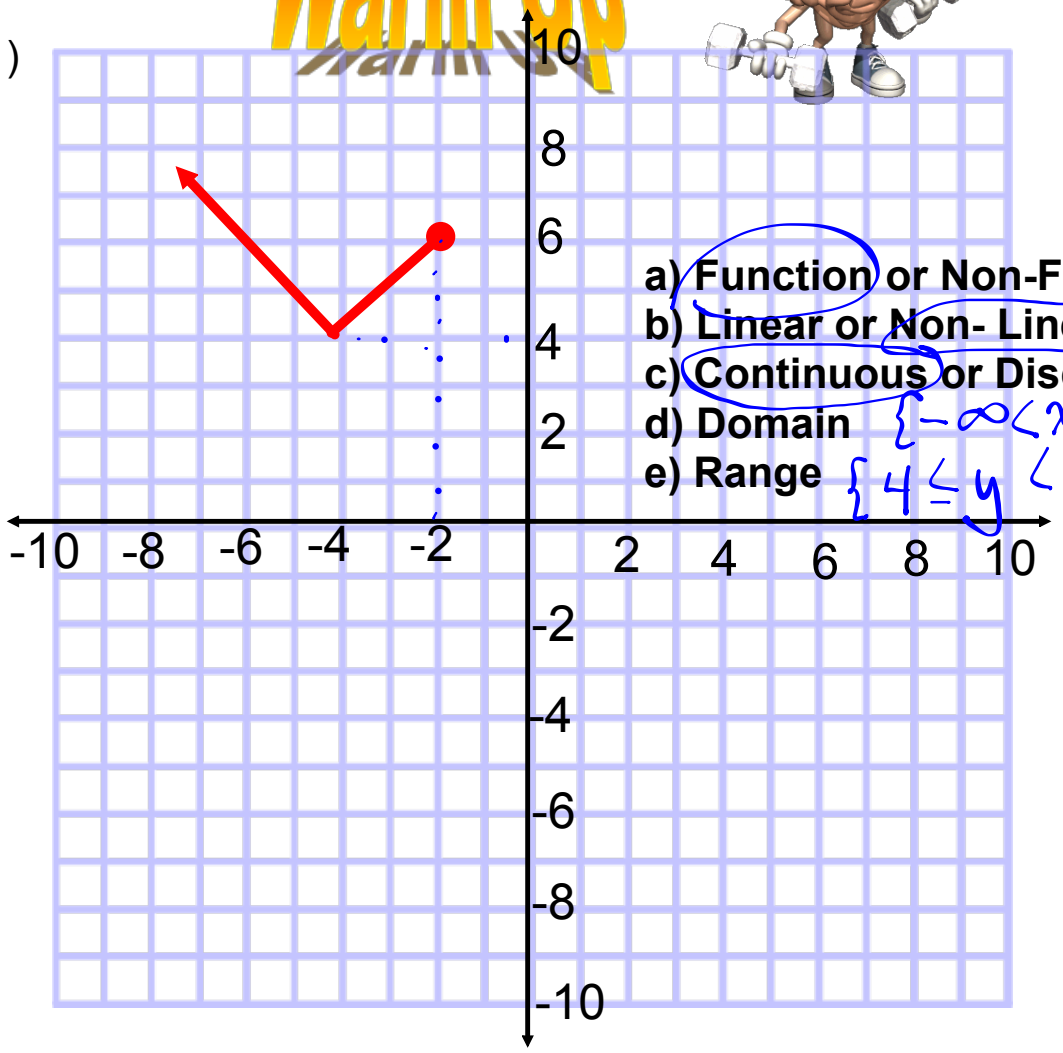
Warm Up



1)



a) Function or Non-Function
b) Linear or Non- Linear
c) Continuous or Discrete
d) Domain $\{-\infty < x \leq -2\}$
e) Range $\{4 \leq y < \infty\}$

2) $t(x) = -7x + 5$ $r(x) = (x+3)^2$

i) $\dfrac{t(5)}{r(-5)} = \dfrac{-30}{4} = \dfrac{-15}{2}$

$t(5) = -7(5) + 5$
$= -35 + 5$
$= -30$

$r(-5) = (-5+3)^2$
$= (-2)^2$
$= 4$

ii) $t(r(-1))$

$r(-1) = (-1+3)^2$
$= (2)^2$
$= 4$

$t(4) = -7(4) + 5$
$= -28 + 5$
$= -23$

$\boxed{f(x)} = 2x + 4$

$f(x)$: y, output

x: domain

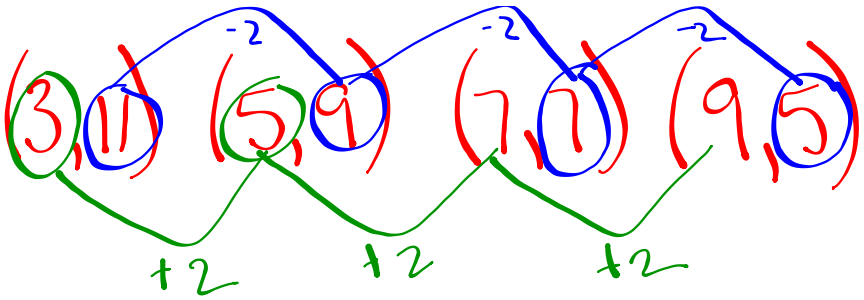
$y = 2x + 4$

3. a)

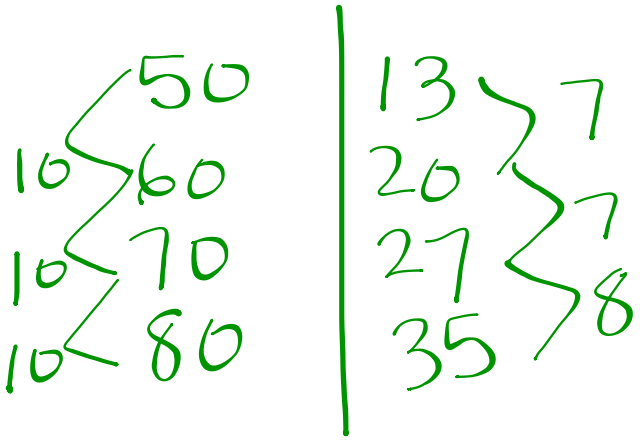
Time	Distance	
0	10	
2	50	40
4	90	40
6	130	40

$\frac{40}{2}$

4. a)



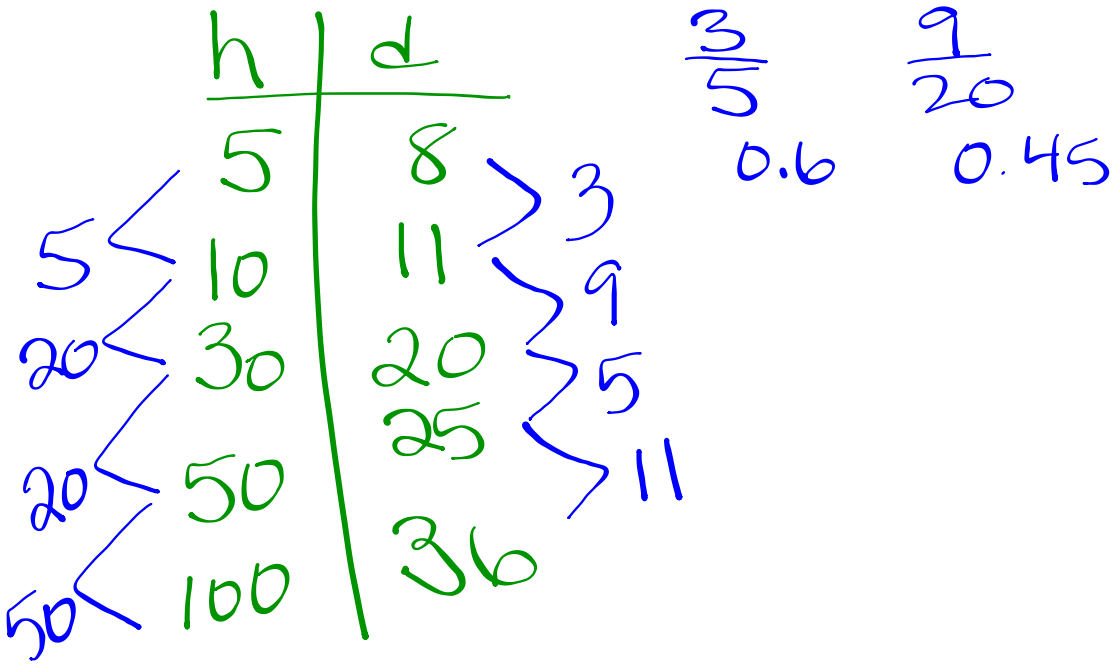
$$\frac{-2}{+2} = -1$$


50
10
60
10
70
10
80
13
7
20
7
27
8
35

t (min)	a (m)	
0	12000	
		-400
2	11600	
		-400
4	11200	
		-400
6	10800	
		-400
8	10400	

$\frac{-400}{2} = -200$

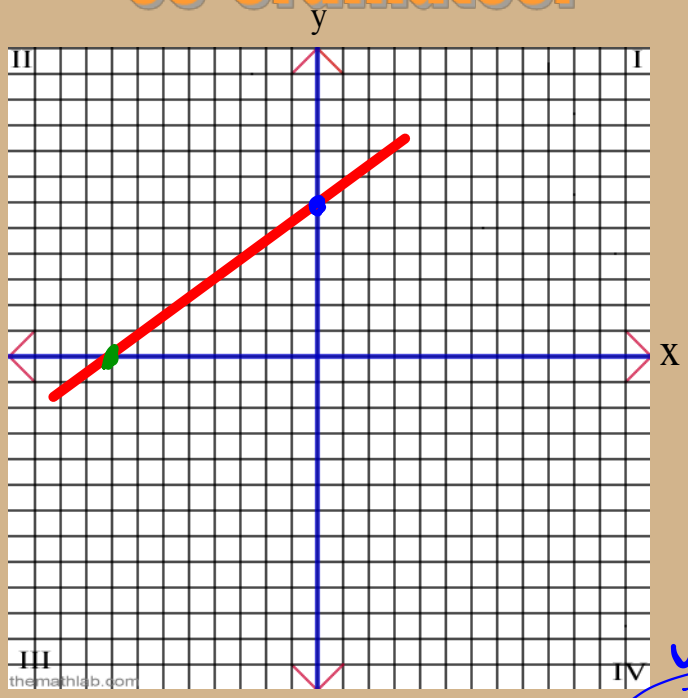
$-200 m/min$


h
d
5
10
30
50
100
8
11
20
25
36
3
9
5
11
5
20
20
50
$\frac{3}{5}$
0.6
$\frac{9}{20}$
0.45

An Internet provider charges $20.00 per month plus $2.00 for each hour used. What is the rate of change of this linear relation?

2

How do you write the co-ordinates?



$f(x) = 2x + 4$

$0 = 2x + 4$

$x = -2$ $(-2, 0)$

x-intercept = -8

$(-8, 0)$

Y = 0 for the x-intercept.

y-intercept = 6

$(0, 6)$

X = 0 for the y-intercept.

$f(x) = 2x^2 + 10$

find yint

$f(0) = 2(0)^2 + 10$

$= 10$

$(0, 10)$

linear relationship

$y = mx + b$

\# \#

ROC

graph: $\frac{\text{rise}}{\text{run}}$

ordered pairs: $\frac{y_2 - y_1}{x_2 - x_1}$

TOV: $\frac{\Delta y}{\Delta x}$

m = Rate of Change (Slope) $\frac{\text{rise}}{\text{run}}$

b = [redacted] (vertical intercept or y-int.)

$y = [redacted] + 4x + 7$

$y = 2x + 4$ ✓

$y = 2(2) + 4$

$y = 1x - y$

$y = \frac{1}{3}$

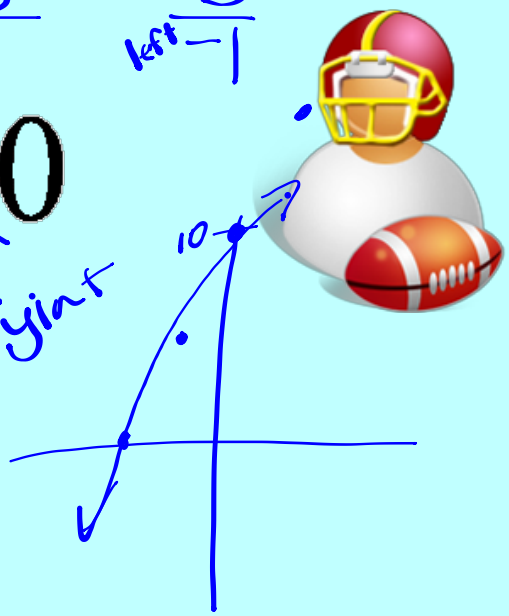
Find the Slope and Y-intercept

up 5 / right 1 down -5 / left -1

1) $y = 5x + 10$

ROC

yint



2) P = -2t - 3

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

yint -3

3) R = $\frac{-5}{2}$g + 7

yint

ROC

4) y = 8 + $\frac{1}{2}$x

yint

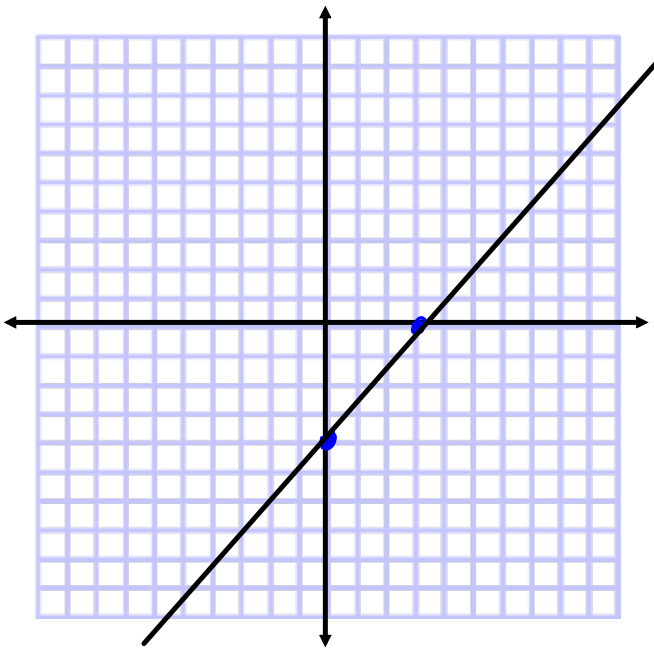
$\frac{1}{2}$

Graph the following:

y intercept = -4

x Intercept= 3

rate of Change= ?



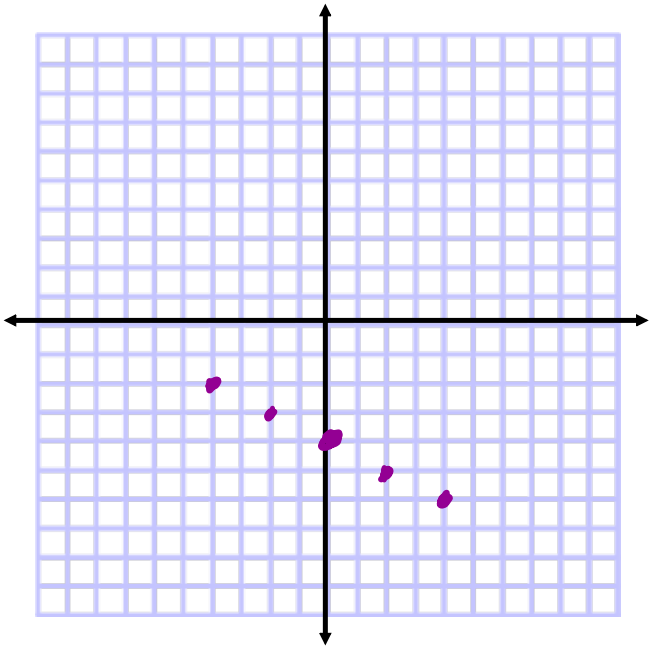
Graph the following:

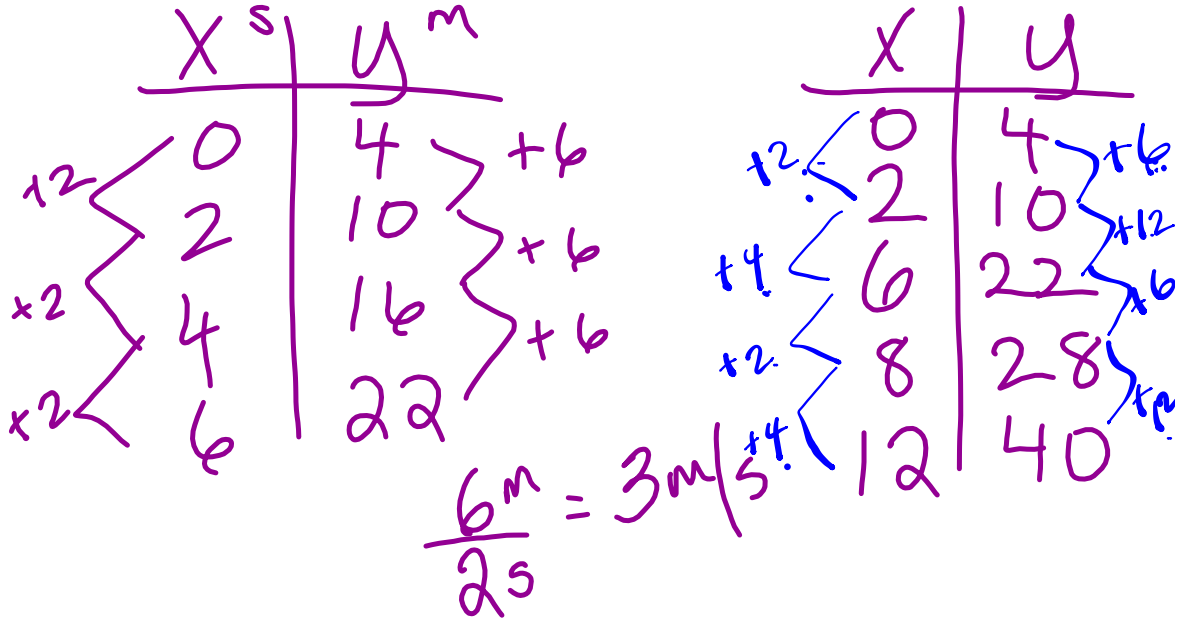
y intercept = -4

Slope = -1/2

down -1
right 2

$\frac{-1}{2}$




x s
y m
0
2
4
6
4
10
16
22
+6
+6
+6
×2
×2
×2
x
y
0
2
6
8
12
4
10
22
28
40
+2
+4
+4
+6
+12
+6
$\frac{6m}{2s} = 3m/s$

Rate of Change

Graph

$\frac{\text{rise}}{\text{run}}$

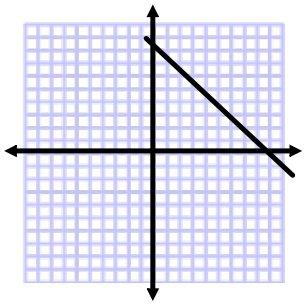


Table of Values

$\frac{\text{compare } y}{\text{compare } x}$

x	y
2	10
4	13
6	16
8	19

2 Points

$$\frac{\Delta y}{\Delta x} = \frac{y_2 - y_1}{x_2 - x_1}$$

$(3, 7)$ & $(7, 12)$

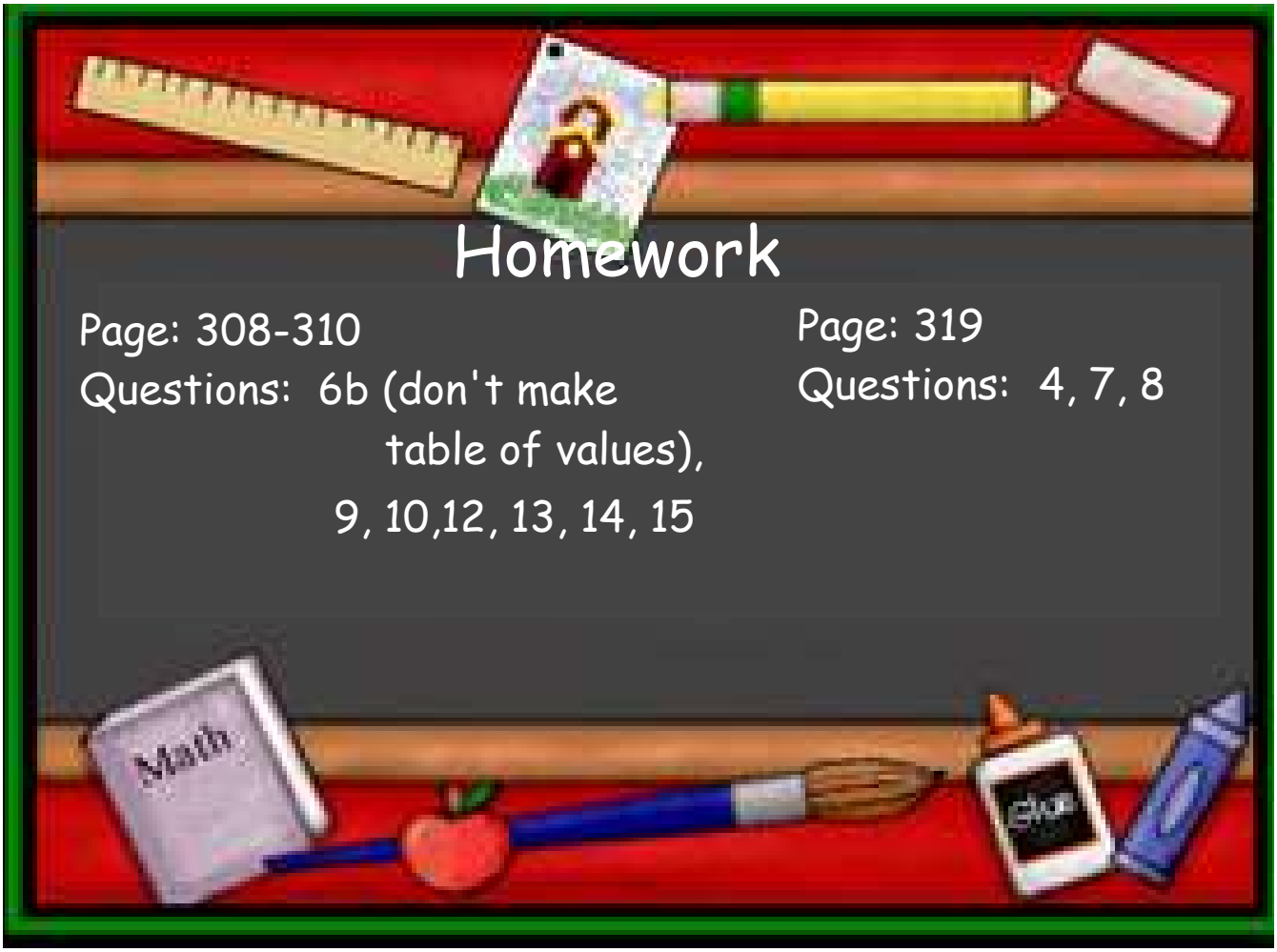
1. $(3, 0)$ $(-5, 7)$ x_1 y_1 x_2 y_2

-8 $+7$ $\frac{7}{-8}$

$\frac{y_2 - y_1}{x_2 - x_1}$ $\frac{7-0}{-5-3}$ $\frac{7}{-8}$

2. $(-6, -4)$ $(-3, 5)$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{5-(-4)}{-3-(-6)} = \frac{9}{3} = 3$


Homework
Page: 308-310
Questions: 6b (don't make table of values), 9, 10,12, 13, 14, 15
Page: 319
Questions: 4, 7, 8
Math
Glue