

Practice TEST #2

1. The y-intercept for $y = 4x - 9$ is -9

2. The slope and the y-intercept for $y = -0.3x + 11$ are:

Slope = -0.3 y-int = 11

3. The equation for the line with slope -1 and y-intercept 0 is:

$y = \underline{-1}x + \underline{0}$

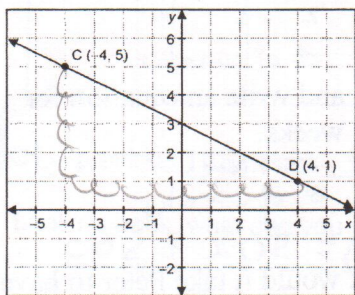
4. The rate of change for $y = 3 - 12x$ is -12

5. The equation of the line through A(5, -2), B(0, -8) is $y = \frac{6}{5}x - 8$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$= \frac{-8 - (-2)}{0 - 5} = \frac{-6}{5}$$

6. Determine the slope of the line segment. Then find the equation of the line



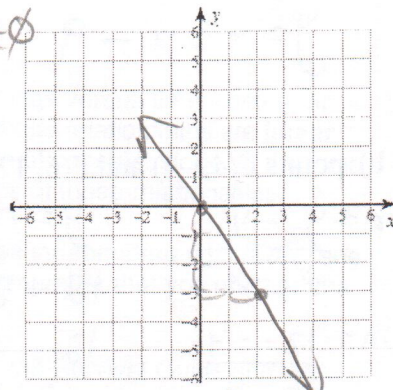
Slope = $\frac{-4}{8}$ Equation: $y = -\frac{1}{2}x + 3$

or $-\frac{1}{2}$

7. On grid below, graph each linear relation

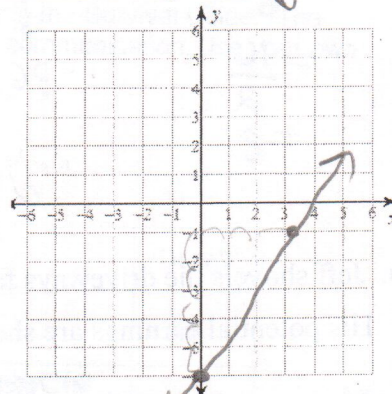
a) $y = -\frac{3}{2}x + 0$

$b = 0$
 $m = -\frac{3}{2}$



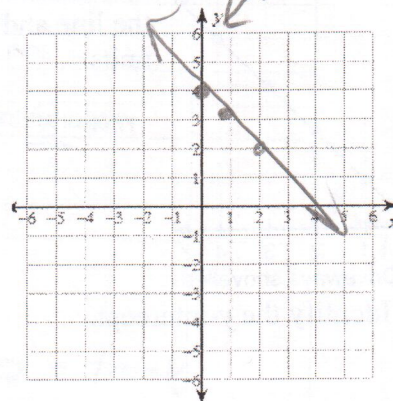
b) $y = \frac{5}{3}x - 6$

$b = -6$
 $m = \frac{5}{3}$



c) $y = 4 - x$

$m = -\frac{1}{1}$
 $b = 4$



8.

Refer to your graphs from question 7.

a) Identify the line(s) that have a negative slope

(a) and (c)

b) Write an equation for a line that is parallel to line a) and has y-int at 9

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

c) Write an equation for a line that is perpendicular to line b) and has y-int at 3

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

9. Write an equation for each line given

a) $m = -3$, and point $N(0, -9)$

$$y = -3x - 9$$

b) points $E(4, -4)$ and $F(6, 12)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$y = mx + b$$

$$12 = 8(6) + b$$

$$m = \frac{12 - (-4)}{6 - 4}$$

$$12 = 48 + b$$

$$= \frac{16}{2}$$

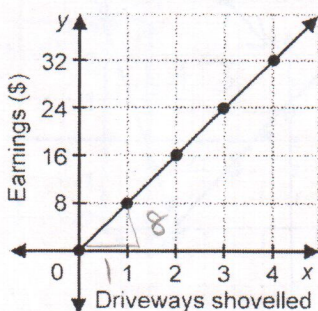
$$= 8$$

$$-48 = b$$

$$\therefore y = 8x - 36$$

10. Jeff shovels the driveways for his neighbours.

His potential earnings are shown in the graph.



a) Determine the slope of the line and record the units.

$$m = \frac{8}{1} \text{ \$ / driveway}$$

b) Identify the y-intercept.

$$y\text{-int} = 0$$

c) Assign variables and create an equation that represents the earnings versus driveways.

let x be # of driveways
let y be earnings

$$y = 8x + 0$$

d) What are his earnings after 9 driveways?

$$8(9)$$

$$= 72 \text{ is his earnings}$$

11. Peter is saving money for college. His parents gave him \$500, and he plans to save \$50 each week.

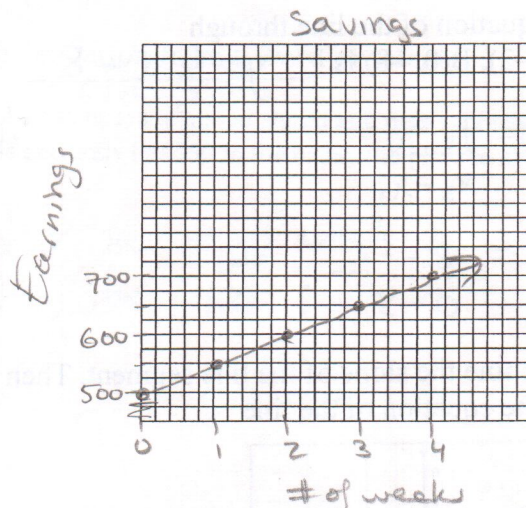
a) Complete the table.

Δx	time (weeks)	Savings (\$)	Δy
	0	500	+50
+1	1	550	
+1	2	600	+50
	3	650	
	4	700	

c) Use differences to find the rate of change or slope of this relation. Record with units.

$$m = \frac{\Delta y}{\Delta x} = \frac{50}{1} \text{ \$ / week}$$

c) Graph the data from the table. Label axes and create a title for the graph.



d) Assign variables and write an equation for savings over the weeks.

let y be earnings
let x be # of weeks

$$y = 50x + 500$$

e) How many weeks would it take Peter to have \$8000?

$$8000 = 50x + 500$$

$$7500 = 50x$$

$$150 = x$$

\therefore in 150 weeks.