

1. Place in slope-intercept form (solve for  $y$ ), identify the  $y$ -intercept and slope, and graph:

$$6x + 8y = 24$$

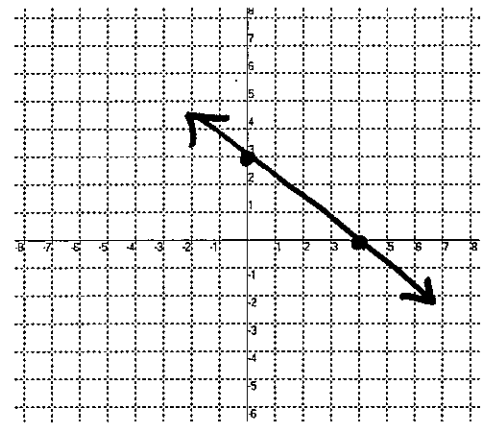
$$8y = -6x + 24$$

$$y = -\frac{6}{8}x + 3$$

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

$$y\text{-intercept: } (0, 3)$$

$$\text{Slope: } -\frac{3}{4}$$



2. Evaluate:  $\frac{40 \div 5 \times 2}{27 - 5^2}$

$$= \frac{8 \times 2}{27 - 25}$$

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

$$= 8$$

3. Given  $f(x) = -6 + 2x^2$

Evaluate  $f(-2) = -6 + 2(-2)^2$

$$= -6 + 2(4)$$

$$= -6 + 8$$

$$= 2$$

4. Identify the domain and range:  $\{(-4, 7), (-1, 3), (5, -8)\}$

Domain:  $\{-4, -1, 5\}$

Range:  $\{7, 3, -8\}$

5. Write THREE ordered pairs that satisfy the equation  $2x + y = 20$

$$(0, 20)$$

$$(1, 18)$$

$$(2, 16)$$

$$2(1) + y = 20$$

$$y = 18$$

$$2(2) + y = 20$$

$$y = 16$$

6. Simplify:  $(45h - 5) - (43h - 6)$

$$45h - 5 - 43h + 6$$

$$\boxed{2h + 1}$$

7. Determine the solution of  $\frac{3}{5}x - 3 = 27$

$$\left(\frac{5}{3}\right) \frac{3}{5}x = 30 \left(\frac{5}{3}\right)$$

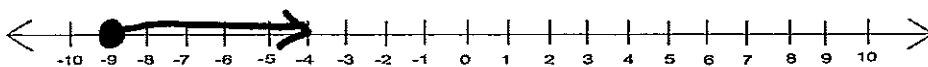
$$\boxed{x = 50}$$

8. Solve and graph on a number line:

$$5 - \frac{2x}{3} \leq 11$$

$$\frac{-5}{2} \left(-\frac{2}{3}x\right) \leq 6 \left(-\frac{2}{2}\right)$$

$$x \geq -9$$

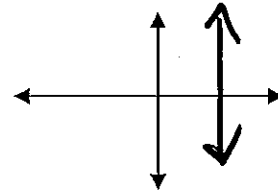


9. Write an equation of a vertical line, and include a sketch, taking care to label appropriately.

Equation:

$$x = \underline{\hspace{2cm}}$$

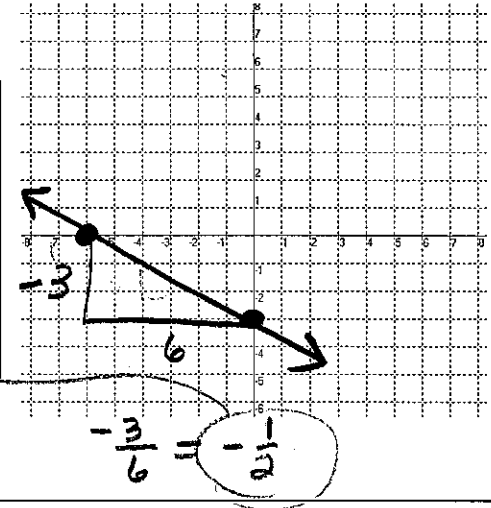
Sketch:



10. Determine the x and y-intercepts, graph, identify the slope:

$$\begin{array}{l} \text{x-int} \\ -4x - 8(0) = 24 \\ -4x = 24 \\ x = -6 \end{array} \quad \begin{array}{l} \text{y-int} \\ -4(0) - 8y = 24 \\ -8y = 24 \\ y = -3 \end{array}$$

x-intercept:  $(-6, 0)$   
 y-intercept:  $(0, -3)$   
 Slope:  $-\frac{1}{2}$



$$\begin{array}{l} -4x - 8y = 24 \\ -8y = 4x + 24 \\ y = -\frac{1}{2}x - 3 \end{array}$$

11. Given  $f(x) = 3x + 5$  and  $h(x) = 2x^2 - 4$ , evaluate each function for the given values:

a) Find  $f(2) = 3(2) + 5$   
 $= 6 + 5$   
 $= 11$

b) Find  $h(3) = 2(3)^2 - 4$   
 $= 2(9) - 4$   
 $= 18 - 4$   
 $= 14$

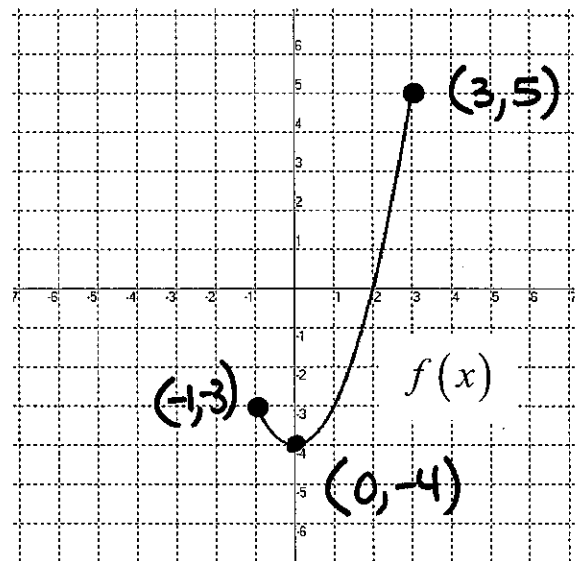
c) Find  $f(0) = 3(0) + 5$   
 $= 0 + 5$   
 $= 5$

d) Find  $h(-1) = 2(-1)^2 - 4$   
 $= 2(1) - 4$   
 $= 2 - 4$   
 $= -2$

12. Determine the domain and range of  $f(x)$ .

Domain:  $-1 \leq x \leq 3$

Range:  $-4 \leq y \leq 5$



13. Given  $y = |x| - 3$

Identify the slope and the y-intercept

$m = 1$   
 $b = -3$

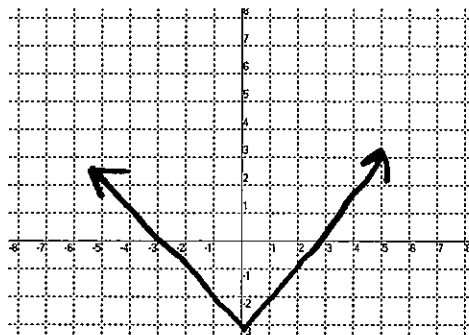
Sketch the graph

Identify the x-intercepts:

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

Domain and Range:

Domain:  $\mathbb{R}$   
 Range:  $y \geq -3$



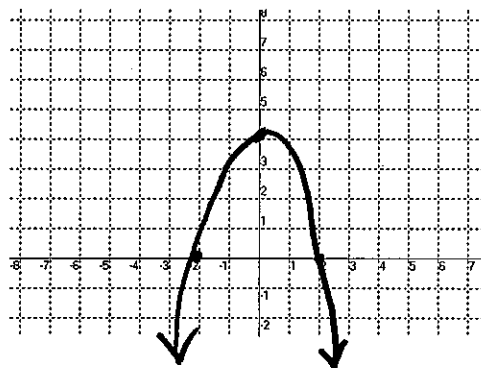
14. Sketch the graph:  $y = -(x)^2 + 4$

x	y
2	0
1	3
0	4
-1	3
-2	0

$-(2)^2 + 4$   
 $-(1)^2 + 4$   
 $-(0)^2 + 4$   
 $-(-1)^2 + 4$   
 $-(-2)^2 + 4$

x-int: ( 2 , 0 )  
 x-int: ( -2 , 0 )

Domain:  $\mathbb{R}$   
 Range:  $y \leq 4$



15. Given the graph shown, identify:

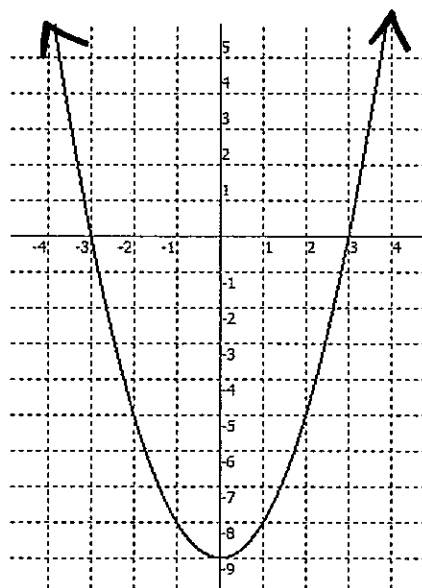
Equation:  $y = x^2 - 9$

Domain:  $\mathbb{R}$

Range:  $y \geq -9$

y-intercept: ( 0 , -9 )

x-intercepts: ( 3 , 0 ) and ( -3 , 0 )



Turn the page!



16. Identify the domain of each function:

a)  $T(x) = \frac{1}{x-5}$

$D: \mathbb{R} \text{ ex } x \neq 5$

b)  $h(x) = \frac{1}{4}x - 3$

$D: \mathbb{R}$

c)  $R(x) = \frac{x-4}{(x+7)(x-3)}$

$D: \mathbb{R} \text{ ex. } x \neq -7, 3$

d)  $f(x) = x^2 + 5$

$D: \mathbb{R}$

Test 1 is next time!

September 14 (A day) and September 15 (B day)

Review Homework:

Page 57: 37, 38, 39  
Page 102: 14 - 18  
Page 142: 33, 34, 35, 38 - 41  
Page 155: 3 - 8, 13-15, 19  
Page 393: 1, 2

