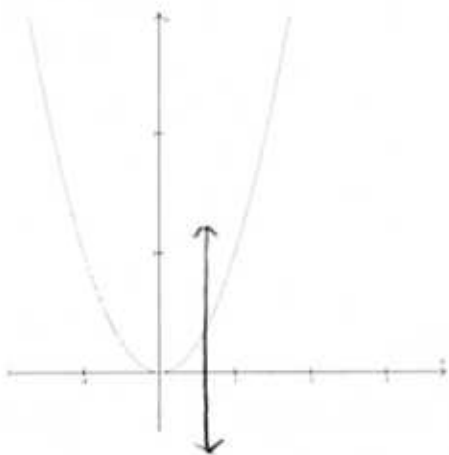
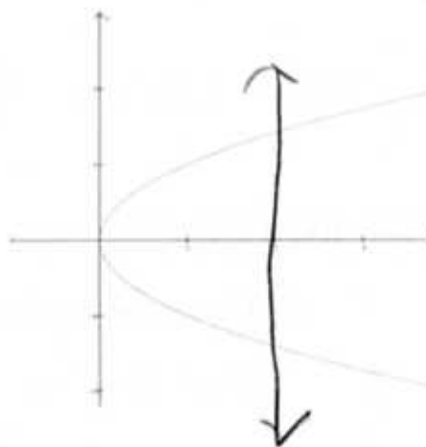


Math 95
Quiz 1 (2.1,2.4)

- 1) Determine whether each of the following is a graph of a function:
Explain your answer.



a) Function because it passes the vertical line test.



b) NOT A Function because it does not pass horizontal line test.

10

- 2) Find the function for $f(n) = 5n^2 + 4n$

a) $f(-1)$

$$\begin{aligned} f(-1) &= 5(-1)^2 + 4(-1) \\ &= 5(1) + (-4) \\ &= 5 - 4 \\ &= 1 \end{aligned}$$

Therefore
 $f(-1) = 1$

10

b) $f(2a)$

$$\begin{aligned} f(2a) &= 5(2a)^2 + 4(2a) \\ &= 5(4a^2) + 8a \\ &= 20a^2 + 8a \end{aligned}$$

Therefore

$$f(2a) = 20a^2 + 8a$$

(x_1, y_1) (x_2, y_2)

3) Find the slope of line containing the points (6,10) and (4,6)

$$\text{Slope } (m) = \frac{y_2 - y_1}{x_2 - x_1} \quad \text{or} \quad \frac{y_1 - y_2}{x_1 - x_2}$$

$$m = \frac{6 - 10}{4 - 6} = \frac{-4}{-2} = 2$$

10

$$\text{Slope } (m) = 2$$

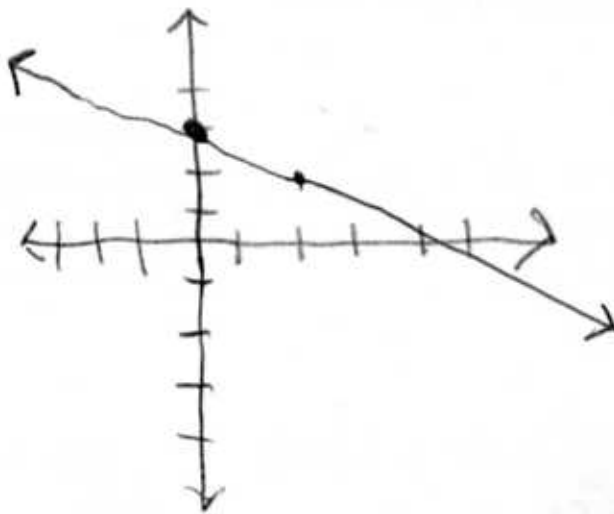
4) Let $f(x) = (-1/2)x + 3$

a) Determine the slope and y-intercept.

$$f(x) = mx + b \quad \text{where } m = \text{slope} \quad b = \text{y-int}$$

Therefore $m = -\frac{1}{2}$ and y-int $(0, 3)$

b) Sketch the graph



10