

LINEAR FUNCTIONS

Form: $f(x) = mx + b$

\downarrow \downarrow
 SLOPE y-INT.

#1 $G(x) = -3x + 2$

$m = -\frac{3}{1} \sim y$ DOWN 3
 $1 \sim x$ RIGHT 1
 y-INT: 2



#2 $P(x) = -\frac{2}{3}x - 1$

$m = -\frac{2}{3} \sim y$ DOWN 2
 3 $\sim x$ RIGHT 3
 y-INT: -1



#3 $F(x) = 2x + 10$

NOTE: TO FIND ZEROS OF A FUNCTION, SET IT EQUAL TO ZERO AND SOLVE

$$2x + 10 = 0$$

$$2x = -10$$

$$\frac{2x}{2} = \frac{-10}{2}$$

$$x = -5$$

#4 $f(x) = \frac{1}{6}q + 3$

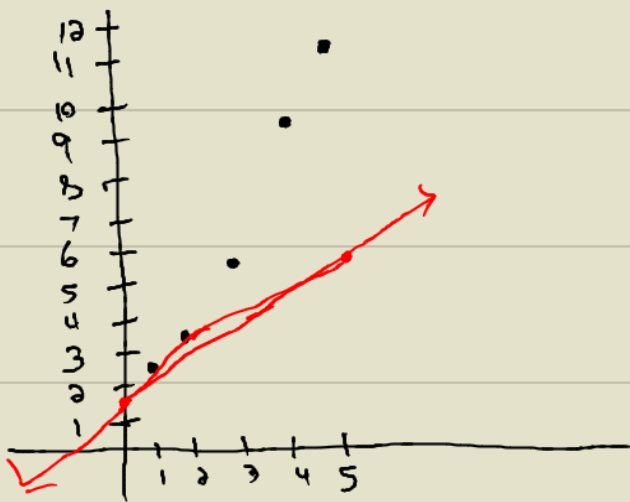
$$\frac{1}{6}q + 3 = 0$$

$$6\left(\frac{1}{6}q\right) + 6(3) = 6(0)$$

$$q + 18 = 0$$

$$q = -18$$

#5
a)



b) $(x_1, y_1) (x_2, y_2)$

① $m = \frac{y_2 - y_1}{x_2 - x_1}$

$$m = \frac{3.2 - 2.4}{2 - 1}$$

$$= \frac{0.8}{1}$$

$m = 0.8$

② $y = mx + b$

$$2.4 = 0.8(1) + b$$

$$2.4 - 0.8 = b$$

$$1.6 = b$$

③ $y = mx + b$

$$y = 0.8x + 1.6$$

$$y = \frac{8}{10}x + 1.6$$

$$y = \frac{4}{5}x + 1.6$$