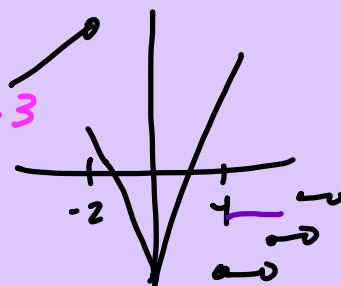


LINEAR FUNCTIONS

$$f(x) = \begin{cases} 2x+8 & \underline{x < -2} \\ 4|x|-5 & -2 < x < 4 \\ [x-2]+1 & x \geq 4 \end{cases}$$



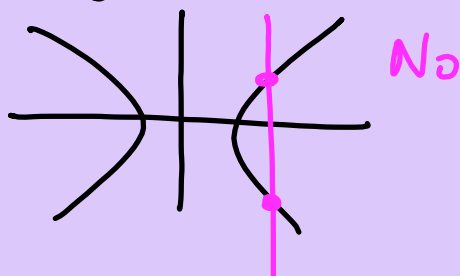
$$f(3) = 4|3| - 5 = 7$$

$$f(-8) = 2(-8) + 8$$

$$-16 + 8 = -8$$

Functions

$$\{(-3, 5) (\underline{6}, -7) (\underline{2}, 5) (\underline{0}, -7)\} \quad \text{yes}$$



$$2) \quad 5x - 8y = 27$$

$$m = -\frac{A}{B} = -\frac{-5}{-8} = \frac{5}{8}$$

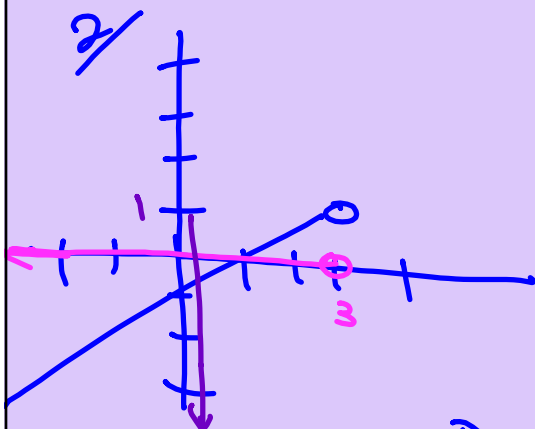
$x=5$ vertical
Slope: undef.

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

5/ Find slopes

$$m_1 = \frac{3}{7} \quad m_2 = \frac{7}{3}$$

Neither



Domain: $x < 3$ Range: $x < 1$

5/ Find x- and y-intercepts

$$4x - 6y = 12$$

$$\begin{array}{r|l} 3 & 0 \\ 0 & -2 \end{array}$$

x-int: (3, 0)

y-int: (0, -2)

Most important:
#7-9

Write eq. of line through (8, -5)
and perpendicular $3x - 2y = 6$.

$$m = -\frac{A}{B} = \frac{+3}{+2}$$

Point-Slope

(8, -5) $\rightarrow$ $\perp m = -\frac{2}{3}$

$$y + 5 = -\frac{2}{3}(x - \frac{8}{1})$$

$$y + 5 = -\frac{2}{3}x + \frac{16}{3}$$

$$-\frac{5}{1} = -\frac{15}{3}$$

$$\boxed{y = -\frac{2}{3}x + \frac{1}{3}}$$