099 § 3.4 I #s 2, 10, 11, 12, 26, 30, 32

#s 1-18 Find the slope of the line thru the given points.

(2) $(x_1, y_1) = (1,6)$, $(x_2, y_2) = (7,11)$ ⟹

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{11-6}{7-1} = \boxed{\frac{5}{6} = m}$$

(10) $(x_1, y_1) = (3,-1)$; $(x_2, y_2) = (-6,5)$ ⟹

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5-(-1)}{-6-3} = \frac{6}{-9} = \boxed{-\frac{2}{3} = m}$$

(11) $(x_1, y_1) = (-2,5)$, $(x_2, y_2) = (3,5)$ ⟹

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5-5}{3-(-2)} = \frac{0}{5} = \boxed{0 = m}$$

(12) $(x_1, y_1) = (4,2)$; $(x_2, y_2) = (4,0)$ ⟹

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0-2}{4-4} = \frac{-2}{0}$$ ∄

#s 25-32 Find slope & y-intercept of each line.

(26) $f(x) = -2x + 6$ ⟹ $\boxed{m = -2,\ (0,b) = (0,6)}$

(30) $-3x - 4y = 6$

$-4y = 3x + 6$

$y = \frac{3x+6}{-4} \Rightarrow y = -\frac{3}{4}x - \frac{6}{4} \Rightarrow y = -\frac{3}{4}x - \frac{3}{2}$

$\boxed{m = -\frac{3}{4},\ (0,b) = (0,-\frac{3}{2})}$