2-3 PRACTICE

1) $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{0-1}{3-0} = \boxed{\frac{-1}{3}}$

2) $\left(\frac{1}{2}, \frac{2}{3}\right)\ \left(-\frac{3}{2}, \frac{5}{3}\right)$

$$\frac{\frac{5}{3} - \frac{2}{3}}{-\frac{3}{2} - \frac{1}{2}} = \frac{\frac{3}{3}}{-\frac{4}{2}} = \boxed{\frac{1}{-2}}$$

3) $(-3,-2)\ \ (1,6)$

$$\frac{6-(-2)}{1-(-3)} = \frac{8}{4} = \boxed{2}$$

4) $(4,-1)\ \ (-2,-3)$

$$\frac{-3-(-1)}{-2-4} = \frac{-3+1}{-6} = \frac{-2}{6} = \boxed{\frac{1}{3}}$$

5) $(3,-5)\ \ (1,2)$

$$\frac{2-(-5)}{1-3} = \frac{2+5}{1-3} = \boxed{\frac{7}{-2}}$$

6) $(8,9)\ \ (8,3)$

$$\frac{3-9}{8-8} = \frac{-6}{0} \leftarrow \boxed{\text{UNDEFINED}}$$

7) $(-3,-3)\ \ (-1,-3)$

$$\frac{-3-(-3)}{-1-(-3)} = \frac{-3+3}{-1+3} = \frac{0}{2} = \boxed{0}$$

8) $\left(\frac{1}{2}, \frac{1}{2}\right)\ \ (-2,-4)$

$$\frac{-4-\frac{1}{2}}{-2-\frac{1}{2}} = \frac{-4\frac{1}{2}}{-2\frac{1}{2}} = \frac{-\frac{9}{2}}{-\frac{5}{2}} = \boxed{\frac{9}{5}}$$

9) $y = mx + b$

$y = -4x + 3$

10) $y = \frac{2}{5}x + \frac{17}{5}$

11) $y = -4$

12) $y = -x + 2$

13) $m = \frac{-4}{1} = \boxed{-4}$

y-INT or $b = \boxed{2}$

14) $m = \frac{1}{2}$ $\quad b = -1.5$

15) $3x - 4y = 12$

$\frac{-4y}{-4} = \frac{-3x}{-4} + \frac{12}{-4}$

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

slope m ; y-int b

16) $y = -2$

$y = 0 \cdot x - 2$

slope m ; y-int

17) $f(x) = \frac{5}{4}x + 7$

slope m ; y-int b

18) $x = 5$ (vertical line)

UNDEFINED slope

19) $4x - 3y = -6$

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

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

slope ; y-INT

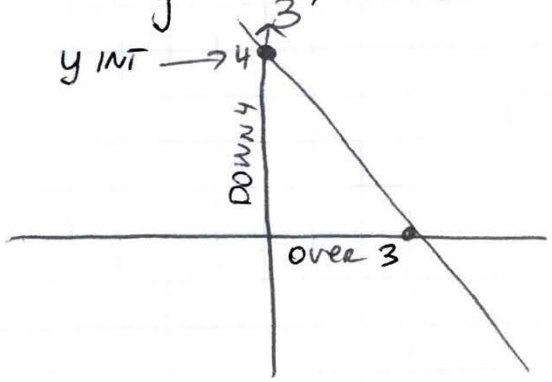
20) $g(x) = -3x - 17.5$

slope ; y INT

21) $4x + 3y = 12$

$\frac{3y}{3} = \frac{-4x}{3} + \frac{12}{3}$

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

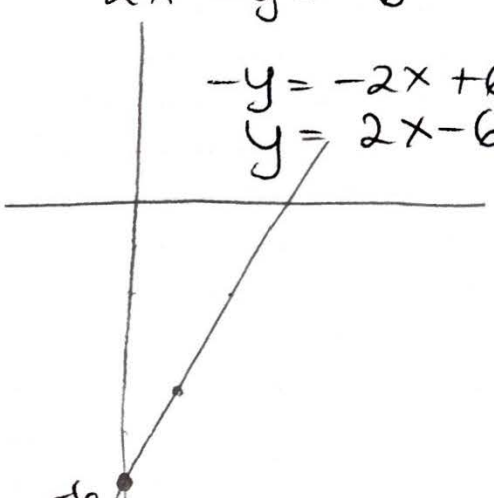


22) $\left(\frac{x}{3} - \frac{y}{6} = 1\right) \cdot 6$

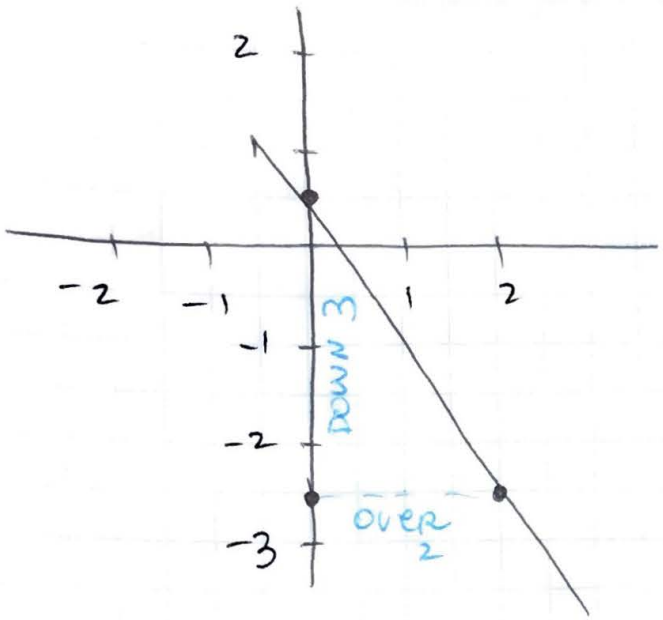
$2x - y = 6$

$-y = -2x + 6$

$y = 2x - 6$



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



24) slope $m = -\frac{1}{2}$

y-INT $b = -1$

25) slope $m = \frac{3}{2}$

y-INT $b = -2.5$

26) slope $m = \frac{2}{1} = 2$

y-INT $b = -2$

27) a) slope would represent number of feet increased per each minute

b) uphill; slope is positive