5-3 Practise Worksheet

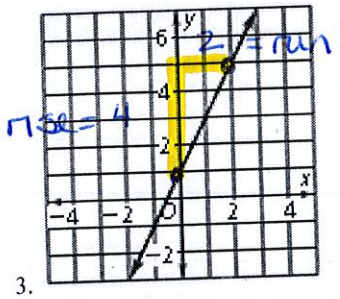
1) $y = \underset{\text{slope}}{3}x \underset{y\text{ intercept}}{-5}$

2) $y = -5$

y intercept

slope is zero

3)



3.

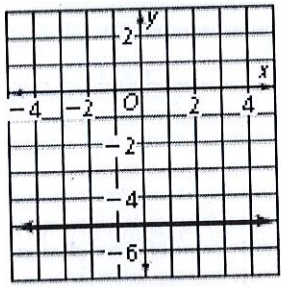
y intercept is 1

$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{+4}{2} = 2$

$y = mx + b$

$\boxed{y = 2x + 1}$

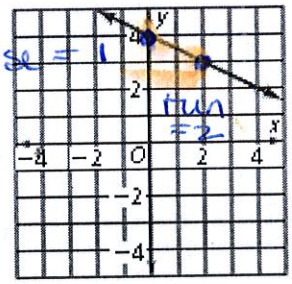
4)



4.

$\boxed{y = -5}$

5.



5.

y-intercept = 4

$\text{slope} = \frac{\text{rise}}{\text{run}} = \frac{-1}{2}$

$y = mx + b$

$\boxed{y = -\frac{1}{2}x + 4}$

6. (3,5) (0,4)

① $\text{slope} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4-5}{0-3} = \frac{-1}{-3} = \frac{1}{3}$

② find b

$y = mx + b$

$4 = \frac{1}{3}(0) + b$

$4 = b$

③ substitute

$\boxed{y = \frac{1}{3}x + 4}$

$x_1\ y_1 \quad x_2\ y_2$

7) $(2,6)(-4,-2)$

① slope $= \frac{y_2-y_1}{x_2-x_1} = \frac{-2-6}{-4-2}$

$= \frac{-8}{-6}$

$= 4/3$

② find b. by substituting

$y = mx + b$

$6 = 4/3(2) + b$

$b = 8/3 + b$

$-8/3 \quad -8/3$

$10/3 = b$

③ substitute

$y = mx + b$

$y = \frac{4}{3}x - 10/3$

8) $(-1,3)\ (-3,1)$

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

$= \frac{-2}{-2} = 1$

$y = mx + b$

$1 = 1(-3) + b$

$1 = -3 + b$

$+3 \quad +3$

$4 = b$

$y = x + 4$

$x_1\ y_1 \quad x_2\ y_2$

9) $(-7,5)\ (3,0)$

$\frac{y_2-y_1}{x_2-x_1} = \frac{0-5}{3-(-7)} = \frac{-5}{10}$

$= -\frac{1}{2}$

$y = mx + b$

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

$0 = -3/2 + b$

$+3/2 = +3/2$

$+3/2 = b$

$y = mx + b$

$y = -1/2x + 3/2$

$x_1\ y_1 \quad x_2\ y_2$

10) $(10,2)$ and $(-2,-2)$

$\frac{y_2-y_1}{x_2-x_1} = \frac{-2-2}{-2-10} = \frac{-4}{-12}$

$= 1/3$

$y = mx + b$

$2 = 1/3(10) + b$

$2 = \frac{10}{3} + b$

$-10/3 = -10/3$

$6/3 - 10/3 = b$

$-4/3 = b$

$\boxed{y = \frac{1}{3}x - \frac{4}{3}}$

$x_1\ y_1 \quad x_2\ y_2$

11) $(0,-1)$ and $(5,6)$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{6-(-1)}{5-0} = \frac{7}{5}$

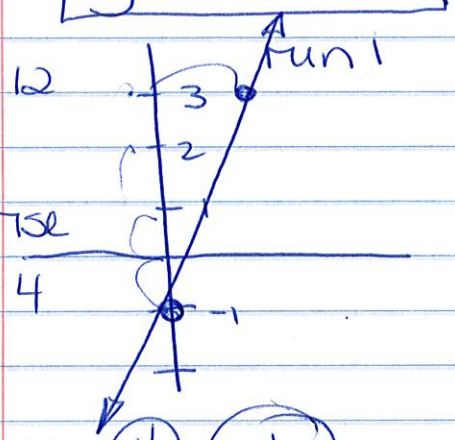
$y = mx + b$

$-1 = \frac{7}{5}(0) + b$

$-1 = b$

$y = mx + b$

$\boxed{y = \frac{7}{5}x - 1}$



$y = (4)x\ (-1)$

slope y inter

13. 40 miles away is beginning pt

65 mi/hr = rate

d = distance travel

h = hrs

$d = mh + b$

$\boxed{d = 65h + 40}$

14.) $y + \frac{1}{2}x = -4$

$y + \frac{1}{2}x - \frac{1}{2}x = -4 - \frac{1}{2}x$

$y = -4 - \frac{1}{2}x$

$\boxed{y = (-\frac{1}{2})x\ (-4)}$

slope y inter.

15. $3y - 12x + 6 = 0$

$+12x - 6 = +12x - 6$

$\frac{3y}{3} = \frac{12x}{3} - \frac{6}{3}$

$y = (4)x\ (-2)$

slope y int

16. $y - 5 = \frac{1}{3}(x - 9)$

$y - 5 = \frac{1}{3}x - 3$

$+5 \qquad +5$

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

m y inter.

slope

17) $y - \frac{2}{5}x = 0$

$y = (\frac{2}{5})x$

slope

y intercept

$y = 0$