18-19 Writing Linear Equations 2.4

Warm-up - Solve each for b.

p.18

1. 
$$10 = (-2)(-3) + b$$

$$10 = (-2)(-3) + b$$

$$10 = (-2)(-3) + b$$

$$-5 = (\frac{1}{2})(-14) + b$$

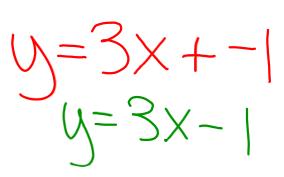
$$-5 = -\frac{1}{12} + \frac{1}{12} + \frac{$$

**Recall:** What 2 pieces of information do we need to know about a line in order to write the SLOPE - INTERCEPT FORM?

$$y = mx + b$$

p.19

1) Write the equation of a line in Slope - Intercept Form with a slope of 3 and y-intercept of -1.



$$y = mx + b$$

p.19

2) Write the equation of a line in

Slope - Intercept Form that

passes through the point (2,3) and has a slope of 
$$-\frac{1}{2}$$
.

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

$$3 = -1 + 6$$

$$4 = 6$$

p.19

Another way we can find the previous problem is by using (2,3)  $m=-\frac{1}{2}$ 

Point-Slope Form \

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

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

$$4 = -\frac{1}{2}x + \frac{1}{3}$$

$$y = mx + b$$

p.19

3) Write the equation of a line in **Slope - Intercept Form** that passes through the point (-1,-3) and has a slope of 4.

$$-3=4(-1)+b$$
 $-3=-4+b$ 
 $+4$ 
 $(=b)$ 
 $(=4x+1)$ 

## **Practice**

## **Complete 2.4 practice worksheet**

-- work with your partner

**Closing Question:** 

Write the equation of a line in Slope - Intercept Form that passes through the point (-5, 4) and has a slope of  $\frac{2}{3}$ .

and has a slope of 
$$-\frac{2}{5}$$
.  

$$4 = \left(-\frac{2}{5}\right)\left(-5\right) + b$$

$$4 = 2 + b$$

$$2 = b$$

$$5 \times +2$$

p.18