Name _____ Section _____

Write a linear equation for a line that crosses thru 2 points.

$y = mx + b$
(slope, y intercept)

Remember, to write a linear equation we need the slope & the y-intercept

EX: (2,3) (4,5) ⟶ Use the slope formula to compute the slope

$\frac{y_2 - y_1}{x_2 - x_1}$ $\frac{5-3}{4-2} = \frac{2}{2} = 1$ = slope

We still need to find b.

Take one set of points, and plug into linear equation:

$y = mx + b$

(2,3)
(x, y)

$3 = 1(2) + b$ Plug in x, y & m
$3 = 2 + b$
$1 = b$

We now know, $m = 1$
$b = 1$, therefore
$y = 1x + 1$

Practice:
(3,4)(4,6)

m =

Plug x, y, m into $y = mx + b$

b =
linear equation =

1) $(-1,0)(1,3)$

$m =$

Solve for $b =$

equation =

2) $(-4,-5)(2,6)$

3) $(4,3)(5,1)$

4) $(-1,-6)(0,2)$

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

6) $(-5,-2)(-1,-6)$