

Lines: Lesson 4

Slope Intercept and Point-Slope Form: Notes

Name: Answer Key

MATH 4 ALL

Slope Intercept Form:

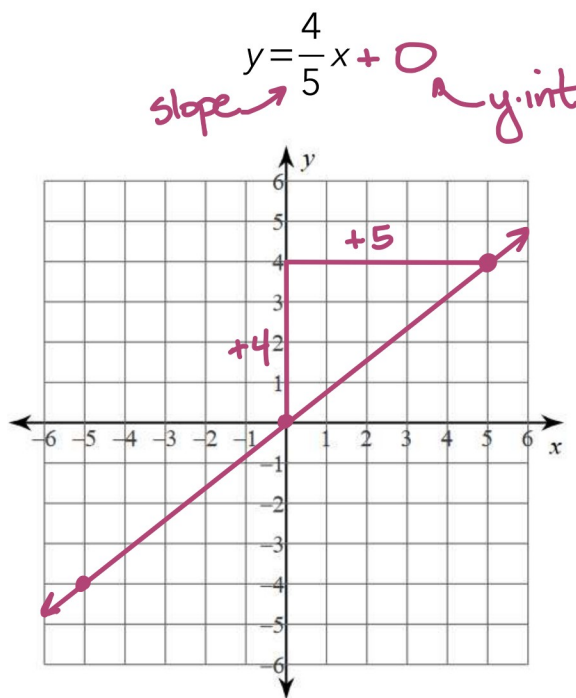
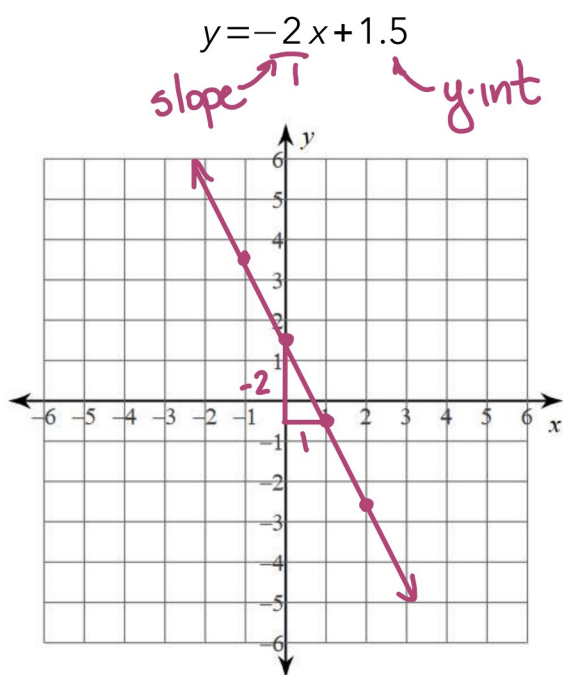
$\frac{\text{rise}}{\text{run}}$

slope

$$y = mx + b$$

y-intercept

Graph the following equations:



Point-Slope Form: $y - y_1 = m(x - x_1)$

What is the Point-Slope form of the line through $(-2, 6)$ with a slope of -4 ?

$$y - y_1 = m(x - x_1) = \underline{y - 6 = -4(x - (-2))}$$

$$\text{simplified: } \underline{y - 6 = -4(x + 2)}$$

What is a point and slope of the line with the equation $y+10=\frac{2}{7}(x-9)$?

Point: $(9, -10)$

Slope: $\frac{2}{7}$

What is the Slope Intercept form of a line with a slope of -1 through the point $(-5, -4)$?

$$y - y_1 = m(x - x_1)$$

$$y - (-4) = -1(x - (-5))$$

$$y + 4 = -1(x + 5)$$

$$y + 4 = -x - 5$$

$$y = -x - 9$$

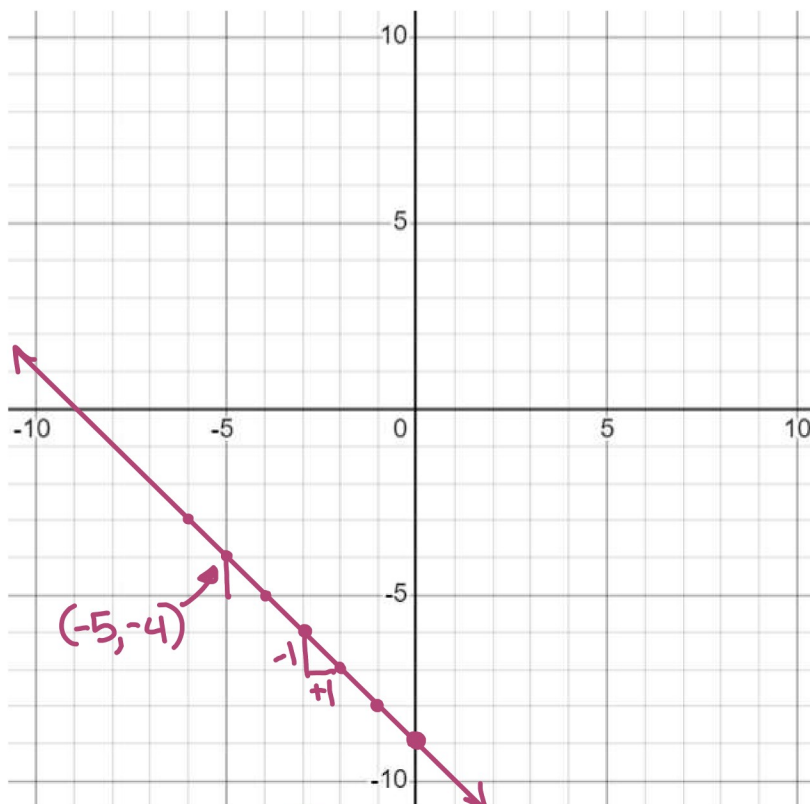
Put in values we know.

Simplify.

Distribute slope.

Move the number away from y .

Graph $y = -x - 9$



Does it go through $(-5, -4)$ with a slope of -1 ? yes!