*Get a calclator.
*Get in your assigned seat.
*Complete the Bell work below.

Write the equation of the line that passes through the points A(-2,7) and B(6,1).

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x_1 y_1 x_2 y_2

need m and b

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{1-7}{6+2} = \frac{-6}{8} = -\frac{3}{4}$$

$\frac{9}{2} = 4\frac{1}{2}$

$y = mx + b$

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

$1 = -\frac{18}{4} + b \longrightarrow 1 = -\frac{9}{2} + b$

$+\frac{9}{2} \quad +\frac{9}{2}$

$5\frac{1}{2} = b$

$y = -\frac{3}{4}x + 5\frac{1}{2}$

slope (m)

-The steepness of a line.

-The amount of slant of a line.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

equation of a line

slope-intercept form

$y = mx + b$

m is the slope of the line

b is the y-intercept of the line (where the line crosses the y-axis

(x,y) is a point on the line

slopes of parallel (///) lines

If two lines have the same slope, what will be true about their slopes?

They have the same slope

$y = -\frac{3}{4}x + 5\frac{1}{2}$

Write the equation of a line parallel.

$y = -\frac{3}{4}x + 3$ $y = -\frac{3}{4}x - 8$

slopes of perpendicular lines

What do we know about perpendicular lines?

Two lines that intersect and form 90° (right ∠s)

How might this help us in understanding their slopes?

Perpendicular line go in the exact opposite direction of each other

$-\frac{3}{4}$ $m_{\perp} = \frac{4}{3}$

$y = -\frac{3}{4}x + 5\frac{1}{2}$

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