Algebra 1 4.2

Write an equation of a a line given a slope and a point

Write an equation of a line given two points

slope m

y-intercept B

linear equation

slope-intercept form $y = mx + B$

constraints requirements of problem

linear extrapolation use eq. to make prediction

activity: card matching

Cut & paste

$m = 2$ y-int $= 6$ $y = 2x + 6$

$m = \frac{1}{3}$ $(6, 1)$ (x, y)

$y = mx + B$

$1 = \frac{1}{3} \cdot 6 + B$

$1 = 2 + B$

$-1 = B$

$y = \frac{1}{3}x + B$

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

Whiteboards

Write the equation of the line:

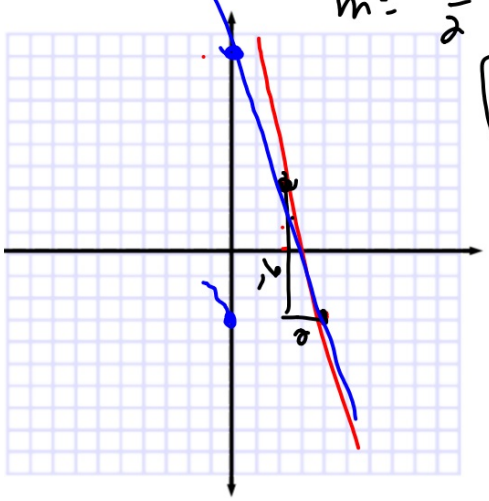
b. (−4, −2) and (−5, −6)

$y = mx + B$ $\boxed{y = -3x + 9}$

Write an equation of the line that passes through each pair of points.

5. (4, −3), (2, 3) x y x y

6. (−7, −3), (−3, 5)



$m = -\frac{6}{2} = -\frac{3}{1}$

$\boxed{y = -3x + B}$

$3 = -3 \cdot 2 + B$

$3 = -6 + B$

$+6 \quad +6$

$9 = B$

$-3 = B$

$m = \frac{8}{4} = 2$

$y = 2x + 11$

Card matching activ and/or speed dating