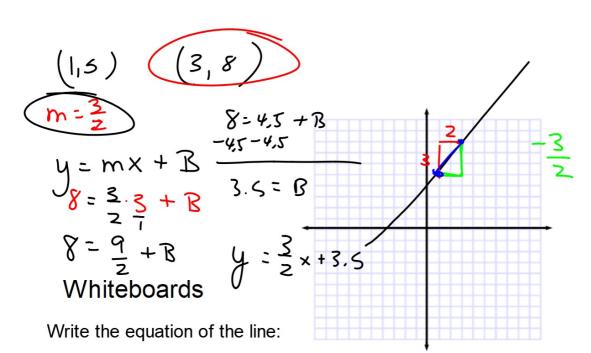Algebra 1   4.2 $y = mx + B$

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

slope $m = 3$ $y = 3x + 5$
y-intercept $B = 5$
linear equation
slope-intercept form $m = \frac{1}{2}$ $6 = \frac{1}{2} \cdot 4 + B$
constraints $6 = 2 + B$ $y = \frac{1}{2}x + 4$
linear extrapolation $(4, 16)$ $\underline{-2 \quad -2}$
                                                        $4 = B$

$(1,5)$ $(3,8)$

$m = \dfrac{3}{2}$

$8 = 4.5 + B$
$-4.5 \quad -4.5$
_____
$3.5 = B$

$y = mx + B$

$8 = \dfrac{3}{2} \cdot \dfrac{3}{1} + B$

$8 = \dfrac{9}{2} + B$

$y = \dfrac{3}{2}x + 3.5$

$-\dfrac{3}{2}$

Whiteboards

Write the equation of the line:

b. $(-4, -2)$ and $(-5, -6)$

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

5. $(4, -3), (2, 3)$ **6.** $(-7, -3), (-3, 5)$

iCE ws due at end of class