key

# Linear Equations

Name:

Hour:

For each problem
- Find the slope
- Find the y-intercept
- Graph the line
- Write in point-slope form
- Write in slope intercept form

1. (-1, -5) (5, 7)

$m = \frac{7-(-5)}{5-(-1)} = \frac{12}{6} = 2$

$m = 2$

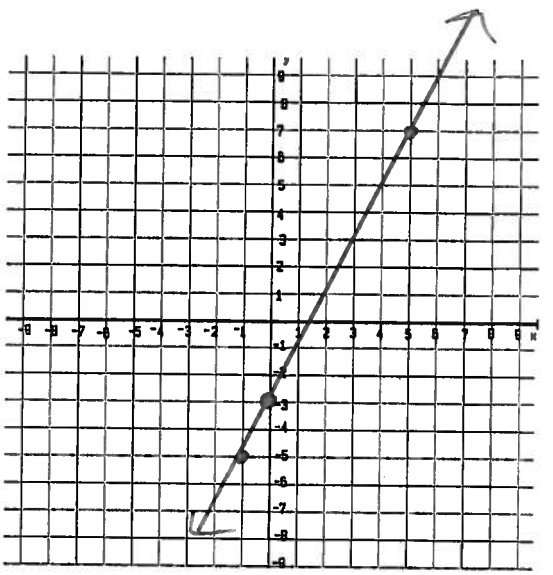
$b = -3$

$y - 7 = 2(x - 5)$

$y - 7 = 2x - 10$

$+7 \quad +7$

$y = 2x - 3$



2. (1, 1) (5, 2)

$m = \frac{2-1}{5-1} = \frac{1}{4}$

$m = \frac{1}{4}$

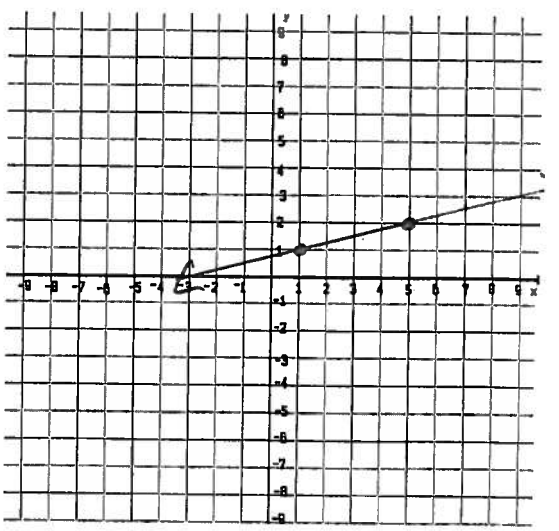
$b = \frac{3}{4}$

$y - 1 = \frac{1}{4}(x - 1)$

$y - 1 = \frac{1}{4}x - \frac{1}{4}$

$+1 \quad +1$

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



3. (1, -3) (-2, 3)

$\frac{3-(-3)}{-2-1} = \frac{6}{-3} = -2$

$m = -2$

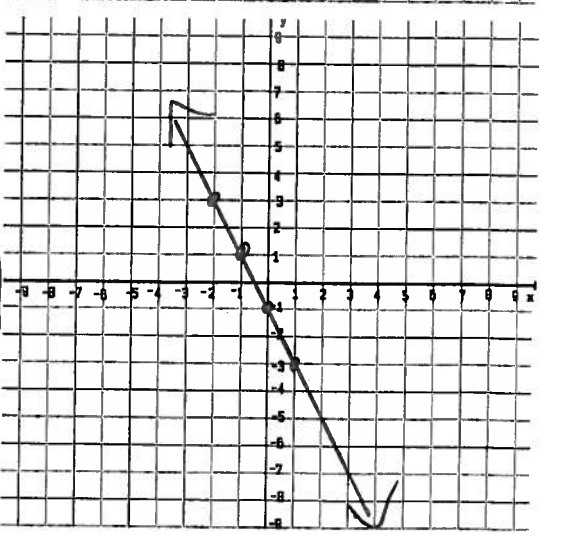
$b = -1$

$y + 3 = -2(x - 1)$

$y + 3 = -2x + 2$

$-3 \quad -3$

$y = -2x - 1$



- Find the slope
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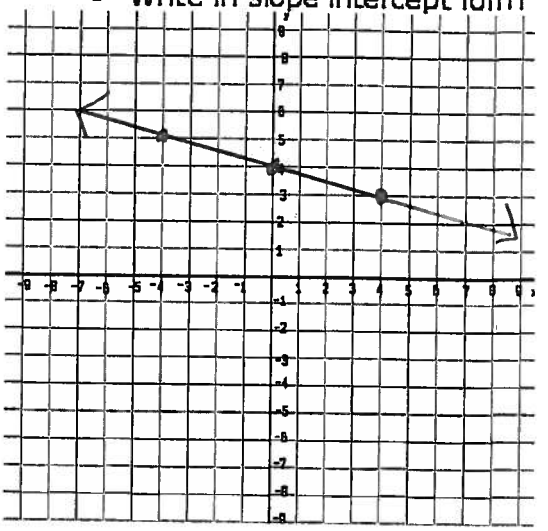
4. $x + 4y = 16$

$4y = -x + 16$

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

$m = -\frac{1}{4}$

$b = 4$



Using the point: (4,3)

$y - 3 = -\frac{1}{4}(x - 4)$

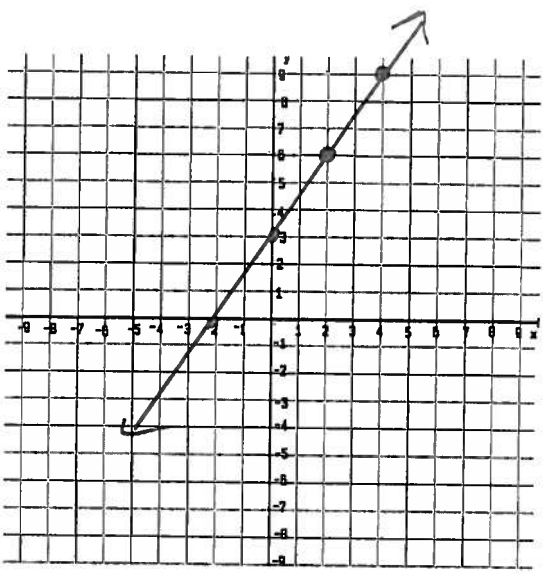
5. $-3x + 2y = 6$

$2y = 3x + 6$

$y = \frac{3}{2}x + 3$

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

$b = 3$



Using the point: (2,6)

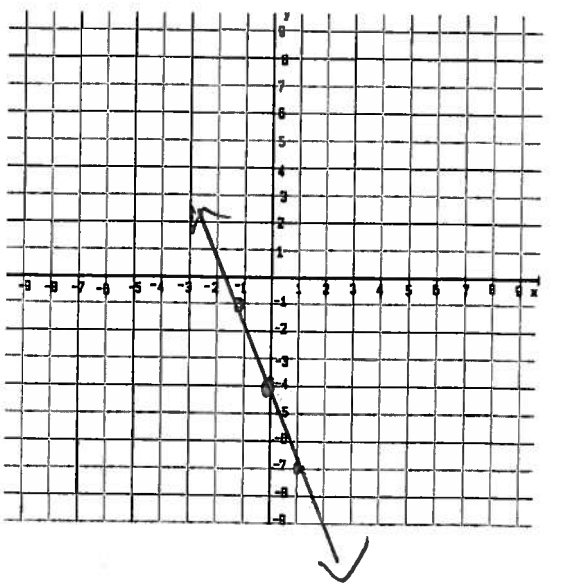
$y - 6 = \frac{3}{2}(x - 2)$

6. $3x + y = -4$

$y = -3x - 4$

$m = -3$

$b = -4$



Using the point: (-1,-1)

$y + 1 = -3(x + 1)$