Algebra I
8-5
Equations of Lines

Slope - $m = \dfrac{\text{rise}}{\text{run}} = \dfrac{y_2 - y_1}{x_2 - x_1}$

Slope / Intercept form of a Line - $y = mx + b$ →slope

y-intercept $(0, b)$

Write an equation in slope / intercept form of each line.   (pg 372)

1) slope = 2; y-intercept = 5

$m = 2$ $b = 5$

$y = mx + b$

└─── want to fill the correct numbers for m and b.

$y = 2x + 5$

Write an equation in slope / intercept form of each line.

11) slope = $\frac{1}{2}$; passes through $(4, -1)$ not b ∵

$m = \frac{1}{2}$ not b ∵

$y = mx + b$
$y = \frac{1}{2}x + b$

Temp

$(4, -1)$
$-1 = \frac{1}{2}(4) + b$
$-1 = 2 + b$
$-2 \quad -2$
$-3 = b$

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

Write an equation in slope / intercept form of each line.

5) slope = $\frac{1}{2}$; x-intercept = 4

$m = \frac{1}{2}$ $(4, 0)$
                not b ∵

$y = \frac{1}{2}x + b$

Temp

$(4, 0)$
$0 = \frac{1}{2}(4) + b$
$0 = 2 + b$
$-2 \quad -2$
$-2 = b$

$y = \frac{1}{2}x - 2$
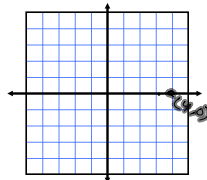
Assignment:
  pg. 372
    2-16 even
      (show all steps!)