177 # 30 - 37

$= 40 - 5w$

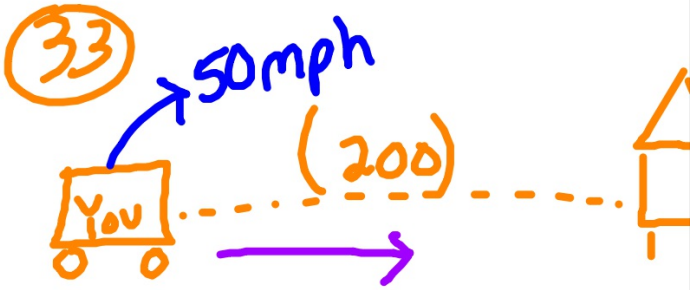
$180 - 2 \cdot m$

$180 - 2(8)$

$= 5 + 2 \cdot h$

$= 5 + 2(6)$

33



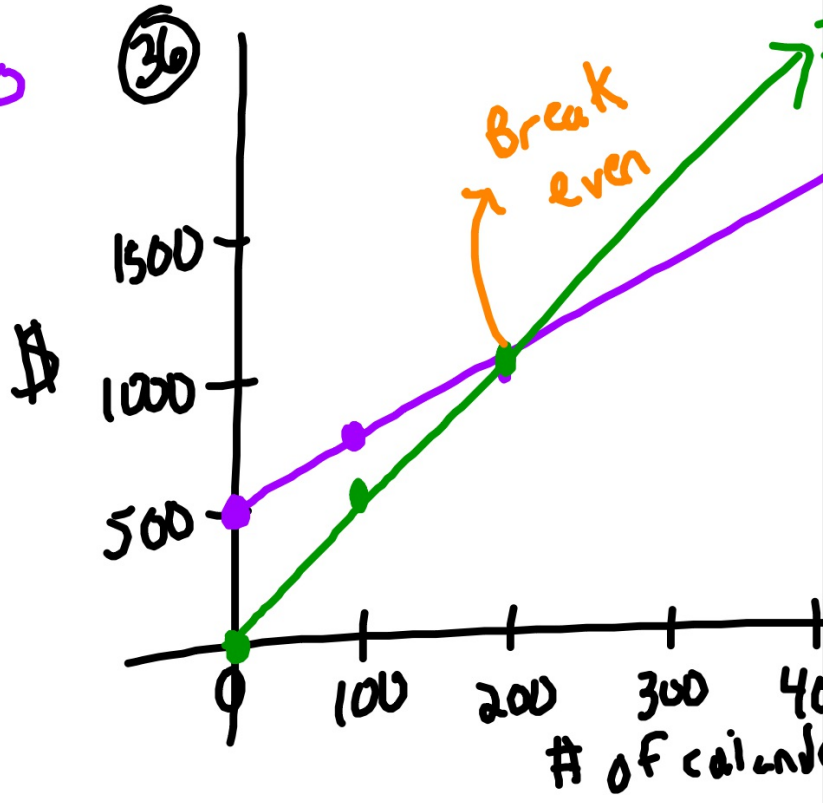
$Dist = 200 - 50 \cdot h$

Cost = 500 + 2.50 · calendars

ost = 2.5x + 500

come = 5x

x = # of



Writing Linear Equations Given the Slope and a Point

CHAPTER 5 SECTION 2

$b=3, m=\frac{2}{1}=2$

$y=mx+b$

$b=-4, m=2$

$y=2x-4$

$b=0, m=2$

$y=2x$

Slope-Intercept Form

- Slope-Intercept form:

$$y=mx+b$$

  - Where m=slope and b=y-intercept

Still using y=mx+b…

- You will write the equation of a line given the slope, m, and a point (x,y)
- Steps:
  - Plug Slope into Equation (m)
  - Plug in the x and y values (x,y)
  - Solve for b
  - Re-write equation in slope-intercept form

Example:

- 1. m=2 and (0,4)

$$y = mx + b$$

$$y = 2x + b$$

$$4 = 2(0) + b$$

$$4 = b$$

$$y = 2x + 4$$

- 2. m=-4 and (-2,6)

x y

$y = mx + b$

$6 = -4(-2) + b$

$6 = 8 + b$

$-8 \quad -8$

$-2 = b$

$y = -4x - 2$

Example:

- 3. m= -½ and (2, 5)

x y

$y = mx + b$

$5 = -\frac{1}{2}(2) + b$

$5 = -1 + b$

$+1 \quad +1$

$6 = b$

$y = -\frac{1}{2}x + 6$

4. m=5 and (-1,-1)

x y

$y = mx + b$

$-1 = 5(-1) + b$

$-1 = -5 + b$

$+5 \quad +5$

$4 = b$

$y = 5x + 4$

Examples

- 5. m = -2, and (3, 1)

x y

$y = mx + b$

$1 = -2(3) + b$

$1 = -6 + b$

$+6 \quad +6$

$7 = b$

$y = -2x + 7$

- 6. m = ½ and (4, -9)

x y

$y = mx + b$

$-9 = \frac{1}{2}(4) + b$

$-9 = 2 + b$

$-2 \quad -2$

$-11 = b$

$y = \frac{1}{2}x - 11$

Class Work

- Blue book- pg 149 # 1-8
- Wkst 5.2 # 1-9 odd

Homework

- Page 282 # 12-28 even