Homework review

p. 240 #24

$$m = \frac{(y_2 - y_1)}{(x_2 - x_1)}$$

$$\frac{5}{6} = \frac{(4 - {}^{-}1)}{(x - 6)}$$

$$5(x-6) = 6(4+1)$$

$$5x - 30 = 6(5)$$

$$5x - 30 = 30$$

$$+30 \quad +30$$

$$\frac{5x}{5} = \frac{60}{5} \quad x = 12$$

$(x, 4)$ $(6, -1)$ $m = \frac{5}{6}$

$(12, 4)$ $(6, -1)$

$$\frac{5}{6} = \frac{(-1-4)}{(6-x)}$$

$$5(6-x) = 6(-1-4)$$

$$6(-5)$$

$$30 - 5x = -30$$

$$-30 \quad -30$$

$$\frac{-5x}{-5} = \frac{-60}{-5}$$

$$x = 12$$

#19)

day	total cost
4	6.00
5	8.25
6	10.50
7	12.75

$$m = \left(\frac{10.50 - 8.25}{6 - 5}\right)$$

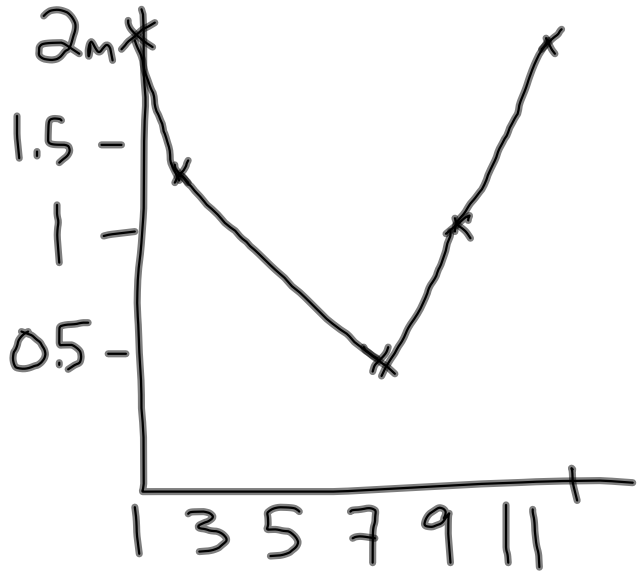
$$= \frac{2.25}{1}$$

$$= \boxed{2.25}$$

the cost of a movie per day

#36)

time	level
1	2
3	1.4
8	0.5
10	1
12	1.8



LESSON 4.5

Practice B

For use with pages 243–250

Identify the slope and *y*-intercept of the line with the given equation.

1. $y = 5x - 4$

x	y
1	1
2	6

x_1, y_1, x_2, y_2

$y = 5(0) - 4 = -4$

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{6-1}{2-1} = \frac{5}{1} = 5$

2. $y = 10 - 4x$

x	y
1	6
2	2

$y = 10 - 4(0) = 10$

$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2-6}{2-1} = \frac{-4}{1} = -4$

3. $9x + y = 8$

4. $12x + 3y = 9$

5. $6x - 2y = 2$

6. $2x + 5y = 10$

3) $9x + y = 8$

$y = -9x + 8$

$y = mx + b$

x	y
1	-1
2	-10

$m = \frac{(-10+1)}{2-1} = \frac{-9}{1} = -9$

$y = -9(0) + 8 = y = 8$

4) $12x + 3y = 9$

$3y = -12x + 9$

$y = -4x + 3$

x	y
1	-1
2	-5

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

$y = -4(0) + 3 = 3$

5) $6x - 2y = 2$

$-2y = -6x + 2$

$y = 3x - 1$

x	y
1	2
2	5

$m = \frac{5-2}{2-1} = \frac{3}{1} = 3$

$y = 3(0) - 1 = -1$

6) $2x + 5y = 10$

$5y = -2x + 10$

$y = \frac{-2}{5}x + 2$

$m = \frac{-2-0}{10-5} = \frac{-2}{5}$

x	y
5	0
10	-2

$\frac{-2}{1} \cdot \frac{2}{5} \cdot 10 = -4$

$y = \frac{-2}{5}(0) + 2 = 2$

$y = mx + b$:

this is a linear equation

(when graphed, it's a line)

m = slope of the line

b = y-intercept of the line

$$\frac{322}{5}x + \frac{7}{9}y = -41$$

$$\frac{9}{7}\cdot\frac{7}{9}y = \left(\frac{-322}{5}x - 41\right)\cdot\frac{9}{7}$$

$$y = \frac{-322\cdot 9}{35}x - \frac{41\cdot 9}{7}$$

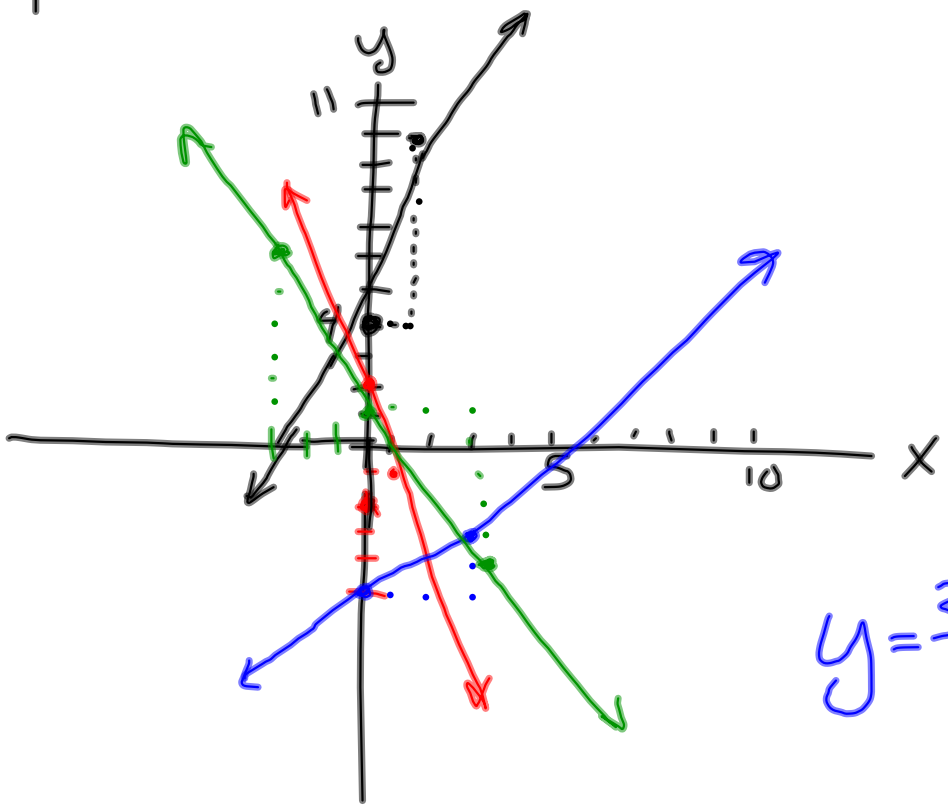
$$y = \boxed{\frac{-2898}{35}}x \boxed{- \frac{369}{7}}$$

Slope

y-intercept

$\frac{6}{1}$

$y = 6x + 4$ — slope: 6; y-intercept: 4



$$\text{slope} = \frac{\text{"rise"}}{\text{"run"}}$$

$y = -3x + 2$

$\frac{-3}{1}$

$y = \frac{2}{3}x - 5$

$\left(-\frac{5}{3}\right)$

$y = -\frac{5}{3} + 1$

$= \frac{5}{-3} + 1$

Homework:

p. 247 2-38 (even), 40