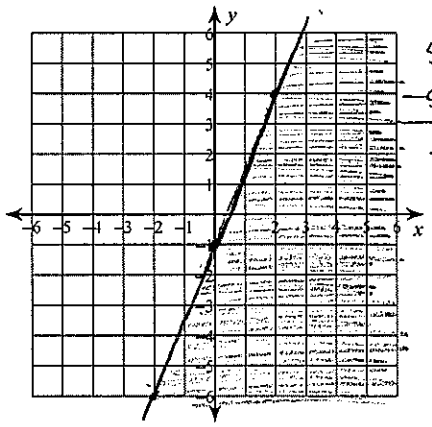
Algebra 1 ECA Remediation Name Answer Key

Review Homework 18.1

Sketch the graph of each linear inequality.

1) $5x - 2y \geq 2$



$5x - 2y \geq 2$

$-5x \quad -5x$

$-2y \geq -5x + 2$

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

$y \leq \frac{5}{2}x - 1$

$y = mx + b$

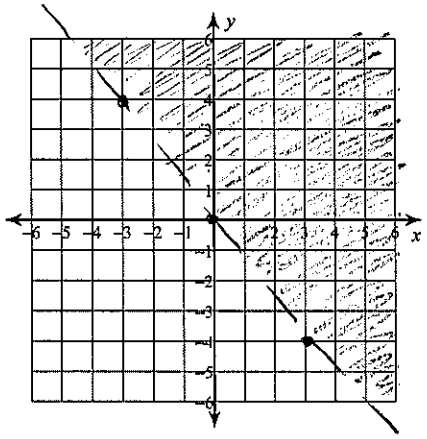
$m = \frac{5}{2}$

$b = -1$

Solid

Below

2) $y > -\frac{4}{3}x$



$y = mx + b$

$m = -\frac{4}{3}$

$b = 0$

Dashed

Above

Solve each question. Round your answer to the nearest hundredth.

3) A teacher has \$27 to buy grapes and oranges for her 7th grade class. The grapes cost \$3.00 per pound and the oranges cost \$1.50 per pound.

grapes \$ 3.00

oranges \$ 1.50

total \$ 27

A. Write an equation that can be used to represent the number of pounds of grapes (g) and the number of pounds of oranges (r) that the teacher can buy for \$27?

$3.00g + 1.50r = 27$

B. If the teacher buys 6 pounds of grapes, how many pounds of oranges can she buy?

$g = 6$

$3(6) + 1.50r = 27$

$18 + 1.50r = 27$

$-18 \quad -18$

$1.50r = 9$

$\frac{1.50r}{1.50} = \frac{9}{1.50}$

$r = 6$

She can buy 6 lbs of oranges

4) For a camping trip, the cost to rent a canoe is \$22 plus \$7.50 per hour.

A. Which of the following equations can be used to represent the total cost (c) of renting a canoe for (h) hours?

$y = mx + b$

7.50 per hour

\$ 22 flat fee

$C = 7.50h + 22$

B. How much would it cost to rent a canoe for 6 hours?

$h = 6$ hours

$C = 7.50(6) + 22$

$= 45 + 22 = \$67$

Solve each system by graphing.

5) $y = -\frac{3}{4}x + 2$ ①

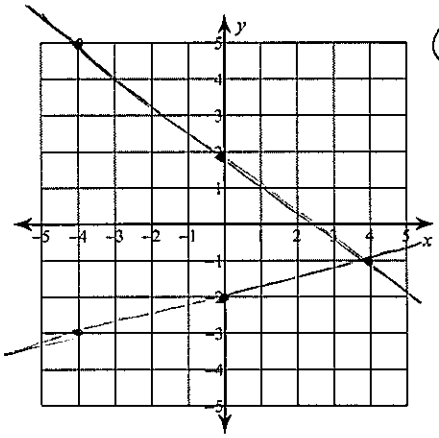
$y = \frac{1}{4}x - 2$ ②

① $m = -\frac{3}{4}$

$b = 2$

② $m = \frac{1}{4}$

$b = -2$



(4, −1)

6) $y = -\frac{1}{2}x - 4$ ①

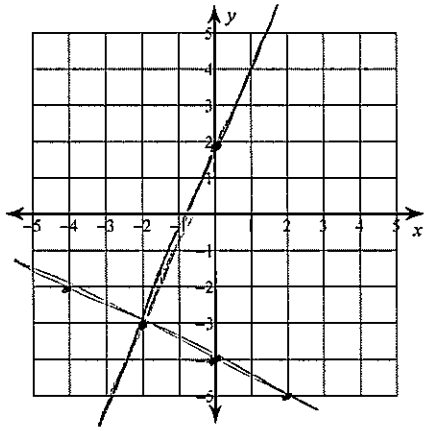
$y = \frac{5}{2}x + 2$ ②

① $m = -\frac{1}{2}$

$b = -4$

② $m = \frac{5}{2}$

$b = 2$



(−2, −3)

Solve each system by elimination.

7) $6x + 3y = -30$ ①

$-6x + 4y = -26$ ②

$7y = -56$

$\frac{7y}{7} = \frac{-56}{7}$

$y = -8$

$6x + 3y = -30$

$6x + 3(-8) = -30$

$6x - 24 = -30$

$+24 \quad +24$

$\frac{6x}{6} = \frac{-6}{6}$

$x = -1$

(−1, −8)

8) $-12x - 3y = -18$ ①

$3x + 5y = -4$ ② $\cdot(4)$

$-12x - 3y = -18$

$12x + 20y = -16$

$17y = -34$

$\frac{17y}{17} = \frac{-34}{17}$

$y = -2$

② $3x + 5y = -4$

$3x + 5(-2) = -4$

$3x - 10 = -4$

$+10 \quad +10$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

(2, −2)

Solve each system by substitution.

9) $-3x + 6y = 15$
$y = x + 3$

$-3x + 6(x+3) = 15$
$-3x + 6x + 18 = 15$
$3x + 18 = 15$
$-18 \quad -18$

$\frac{3x}{3} = \frac{-3}{3}$

$x = -1$

$y = -1 + 3$

$y = 2$

$(-1, 2)$

10) $y = x + 5$
$-x + 4y = 23$

$-x + 4(x+5) = 23$
$-x + 4x + 20 = 23$
$3x + 20 = 23$
$-20 \quad -20$

$\frac{3x}{3} = \frac{3}{3}$ $\quad x = 1$

$y = 1 + 5$

$y = 6$

$(1, 6)$

Solve each proportion.

11) $\frac{v}{10} = \frac{(v-4)}{6}$

$6v = 10(v-4)$
$6v = 10v - 40$
$-10v \quad -10v$

$\frac{-4v}{-4} = \frac{-40}{-4}$

$v = 10$

12) $\frac{x}{(x-10)} = \frac{4}{5}$

$5x = 4(x-10)$
$5x = 4x - 40$
$-4x \quad -4x$

$x = -40$

Solve each equation.

13) $-7(2v+4) = -6(3v+8)$

$-14v - 28 = -18v - 48$
$+18v \qquad +18v$

$4v - 28 = -48$
$+28 \quad +28$

$\frac{4v}{4} = \frac{-20}{4}$

$v = -5$

14) $-8x + 2(1 - 2x) = -2(-3 + 8x)$

$-8x + 2 - 4x = 6 - 16x$
$-12x + 2 = 6 - 16x$
$+16x \qquad +16x$

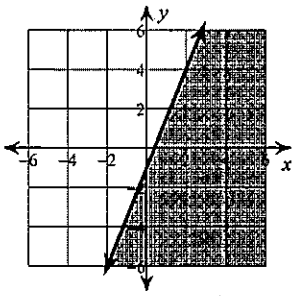
$4x + 2 = 6$
$-2 \quad -2$

$\frac{4x}{4} = \frac{4}{4}$

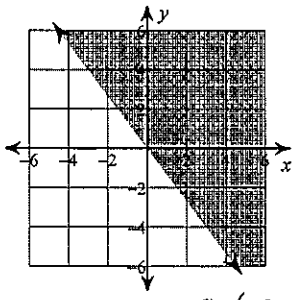
$x = 1$

Answers to Review Homework 18.1

1)



2)



3) $3.00\,g + 1.5\,r = 27$; 6 pounds

4) $c = 7.50h + 22$; \$67

5) $(4, -1)$

6) $(-2, -3)$

7) $(-1, -8)$

8) $(2, -2)$

9) $(-1, 2)$

10) $(1, 6)$

11) $\{10\}$

12) $\{-40\}$

13) { All real numbers. }

14) $\{1\}$