

## Section 6.5 – Chapter Summary

### Problem Set 3

**Find the intersections of the following pairs of lines.**

- $2y + 3x = 13$  and  $y - 2x = 3$
- $5y = -x + 6$  and  $3y + 2x = 5$
- $3x - 2y = 2$  and  $6x = 3y + 6$
- $2x - 3y = -13$  and  $2y + 5x = 27$
- $4x + y = 3$  and  $3x + 7y = 21$
- $-2x + 2y = 7$  and  $-4x - 2y = -2$
- $\frac{3}{8}x - y = -\frac{1}{3}$  and  $\frac{3}{2}y + \frac{3}{10}x = \frac{1}{2}$
- $6x - y = 43$  and  $x + 3y = -15$
- $5x + 2y = \frac{13}{4}$  and  $4x + y = 2$
- $4x + 2y = 20$  and  $7x = 8y - 11$

**Graph the following inequalities**

- $2x + 2y > 9$
- $2x < -3y + 2$
- $3x \leq -y - 4$
- $4x \geq y + 3$
- $-3x + 4y \geq 3$
- $3y + 5x < 2$

**Graph the solution of the following systems of linear inequalities.**

- $2y + x > -2$  and  $x - 3y < 5$
- $3y - 3x > 2$  and  $3x + 2y > -4$
- $4y + 3x < 6$  and  $y + 5x < 10$
- $3x + 5y \leq -2$  and  $2x - 3y > 3$
- $y + 2x \geq 3$  and  $3y < 12$
- $3x + 5y > 4$  and  $2y - 2x < -3$

**Find the following values.**

- An investor puts \$8,000 in two accounts, one earning 4.5% and the other earning 6%. If the two accounts together earn \$70.75, how much is invested in each account?
- It takes a boater an hour to paddle 12 miles going with the current. The return trip took forty minutes with the current reduced to half its original speed. What was the speed of the current?
- Linda has a combination of nickels, dimes and quarters. If she has 12 nickels, a total of 35 coins and their total value is \$4.40, how many of each kind of coin does she have?
- A company needs to make a lead alloy that's 85% lead. If they already have alloys that are 95% and 50%, how many of each would they need to mix to make 1,000 pounds of the 85% mixture?