

Section 6.5 – Chapter Summary

Problem Set 2

Find the intersections of the following pairs of lines.

- $3y + 4x = 3$ and $-2y + x = -2$
- $4y = -2x$ and $2y + 7x = 10$
- $2x - 3y = 14$ and $5x = 2y + 35$
- $x + y = -2$ and $2y - 3x = 1$
- $3x - 3y = -18$ and $2x + 6y = 28$
- $-3x + y = -7$ and $-2x + 4y = 12$
- $\frac{2}{5}x - y = -\frac{1}{5}$ and $\frac{3}{5}y + \frac{1}{10}x = \frac{4}{5}$
- $5x - 2y = 1$ and $5x + 4y = 1$
- $4x + y = 14$ and $5x - 2y = 9$
- $3x + 3y = 4$ and $2x = 9y - 3$

Graph the following inequalities

- $3x \geq 2y + 1$
- $x < -2y + 1$
- $4x + 5y > 3$
- $2y - 2x < 7$
- $-2x + 5y \geq 4$
- $x \leq -2y - 5$

Graph the solution of the following systems of linear inequalities.

- $2y + 2x \geq 3$ and $y < 0$
- $2x + 4y > 5$ and $3y - x < -2$
- $3y + 2x < -1$ and $2y + 2x < -5$
- $3y + 2x > 1$ and $3x + y < -4$
- $5x + 4y \leq 0$ and $3x - 4y > 6$
- $4y + 3x > 8$ and $4x + 6y > 1$

Find the following values.

- John has a bank with nickels and pennies. If there are a total of 100 coins and their total value is \$4, how many of each kind of coin does he have?
- An investor puts \$1,250 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?
- A small plane can fly 2875 miles with the wind in 5 hours. If the same 5 hour flight only covers 2125 miles going against the wind, what's the plane's speed?
- A nurse needs a 5% salt solution but she only has 2.5% and 10% solutions. How much of each does she need to make 500ml of the required 5% solution?