**Lab for Section 6.6** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Use good notation and show appropriate work. Write solutions to application problems in* ***complete sentences***.

1. (a)  (b)  (c) 

2. Write the solution set for each inequality in set-builder notation and graph the solution on a number line.

(a)  (b) 3(5 –2*x*) + 3 > 4(5 – 3*x*) + 9

(c) 6.2 < 5*x* – 0.3 < 8 (d) 

3. Two-thirds less than twice a number is greater than three more than half the number. Find the set of numbers that satisfy this relationship?

4. Pat receives a weekly base salary of $600 and an 8% commission on all sales over $4,000. Pat would like to earn at least $1,100 each week. What is the sales range Pat must meet each week?

5. After corrosion, a pivot bar may have range of motion between 32% and 40% of the original range of motion. If the corroded range of motion is 38.4 degrees, what was the original range of motion?

6. Four pens of equal size should be formed from 220 feet of fencing. The length of the total rectangular area formed should be more than triple the width. Find possible widths of the pens.

*width*