Lab 3 for Section 6.2, 6.3, and 6.4 Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

1. (a) A clothing item was purchased for (b) A clothing item was purchased for $29.82

$23.54 in Fargo. Find the cost before tax in Cooperstown. Find the cost before tax

tax if there is a 7% sales tax. if there is a 6.5% sales tax.

2. Solve each equation.

(a) 23*y* – 1282 = 45*y* + 754 (b) 1.5(*z* + 3) – 0.5*z* = 3*z* – (2*z* + 0.4)

3. Solve each formula for the indicated variable.

(a) 3*a* + 4*b* + 5*c* = 28*d* for *b*. (b)  for *g*.

4. A hotel lobby is to include two seating areas. One area has three more than four times the chairs in the other area. There are a total of 13 chairs. How many in each seating area?

5. In a rectangle the width is four more than one fifth of the length. The perimeter is 32 inches. Find the length and width of the rectangle.

6. After a shoulder injury Sonya was told that her range of motion would be only 72% of what it originally was. Her post injury range of motion is 162 degrees. What was or original range of motion?

7. Four pens of equal size should be formed from 220 feet of fencing. The length of the total rectangular area formed should be triple the width. Find the length and width of each individual pen.

*width*