Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Hour: \_\_\_\_\_\_\_\_\_

Advanced Angle Relationships: Homework #2

**In the figure,** $\vec{YX} and \vec{YZ}$ **are opposite rays.** $\vec{YU}$ **bisects** $<ZYW$**, and** $\vec{YT}$ **bisects** $<XYW$**. Show your work. Justify the set up and SHOW GEOMETRY!**

1. If $m<ZYU=8p-10$ and $m<UYW=10p-20$, find $m<ZYU$.

2. If the $m<1=5x+10$ and the $m<2=8x-23$, find $m<2$.

3. If $m<1=y$ and $m<XYW=6y-24$, find y.

4. if $m<WYZ=82$ and $m<ZYU=4r+25$, find r.

5. If $m<WYX=2(12b+7)$ and $m<ZYU=9b-1$, find $m<UYW$.

**Find x and the measure of each angle. Show GEOMETRY and JUSTIFY SET UP!**



6. 7.

8. **Draw a picture of indicated situation, find the value of the variable. Justify the set up!** <ABC and <CBD are complementary. If $m<ABC=6m+8$ and $m<CBD=3m+10$, draw and label the figure and solve for m. Be sure to not use two of the same points (ex. You can’t have two point Bs, they must share one B.)

9. Find an angle and its supplement if the angle has a measure of eight more than three times the other.

10. Find an angle and its complement if the angle has a measure of one less than six times the other.