**ACC Geometry**

**Advanced Angle and Segment Relationships: Class Work**

1. Find the measure of $\overbar{BC}$ if B is the midpoint of $\overbar{AC}$.

**Find the value of the variable and ST if S is between R and T. Justify your steps.**

2. $RS=7a, ST=12a, RT=76$ 3. $RS=12, ST=2x, RT=34$

4. $RS=4y-1, ST=2y-1, RT=5y$

$\vec{BA} and \vec{BC} are opposite rays, which means \\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_\\_.$$\vec{BF} $ **bisects <CBE and** $\vec{BD} $**bisects <ABE. Justify your steps.**

5. What does it mean to bisect an angle? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. If $m<EBF=6x+4$ and $m<CBF=7x-2$, find $m<EBC$.

7. If $m<1=4x+10$ and $m<2=5x$, find $m<2$.

8. If $m<2=6y+2$ and $m<1=8y-14$, find $m<ABE$.

9. Is $<DBF$ a right angle? Explain.

**Justify your steps.**

10. Find x.



11. Find x.



12. The measures of two complementary angles are $m<A= 16z-9$ and $m<B=4z+3$. Find the measures of both angles.

**13.** Find the measures of an angle and its complement if one angle measures 18 degrees more than the other.

**14.** The measure of the supplement of an angle is 36 less than the measure of the angle. Find the measures of the angles.