**The following are optional, extra credit possibilities.**

*More Conjectures to Complete and Prove*

1.  If a quadrilateral has one pair of sides that are both parallel and congruent then
    _____.

2.  The diagonals of a kite are _____.

3.  The diagonals of an isosceles trapezoid are _____.

*More Statements to Prove*

4.  If a parallelogram contains at least one right angle then it is a rectangle.

5.  If the diagonals of a quadrilateral are perpendicular bisectors of each other, then the quadrilateral is a rhombus.

6.  Consider a segment $\overline{AB}$ and its perpendicular bisector.
a.  Prove:  If a point is on the perpendicular bisector of $\overline{AB}$ then it is equidistant from A and B.
b.  Prove:  If a point is equidistant from A and B then it is on the perpendicular bisector of $\overline{AB}$.

7.  If the diagonals of a quadrilateral divide each angle into two 45 degree angles, the quadrilateral is a square.

8.  If, in a triangle, the bisector of an exterior angle formed by extending one of the sides is parallel to a side of the triangle, the triangle is isosceles.