Advanced Geometry
WS- Biconditionals and Definitions

Name:_____
Period:_____Date:_____

Each conditional statement below is true. Write its converse. If the converse is true, combine the statements as a biconditional:

1. If two angles have the same measure, then they are congruent.

   Converse:_____

   Truth value:_____

   Biconditional:_____

2. If $2x - 5 = 11$, then $x = 8$.

   Converse:_____

   Truth value:_____

   Biconditional:_____

3. If $x = -10$, then $x^2 = 100$.

   Converse:_____

   Truth value:_____

   Biconditional:_____

4. If a student is a sophomore, then the student is in the tenth grade.

   Converse:_____

   Truth value:_____

   Biconditional:_____

Write the two conditional statements that make up each biconditional.

5. A whole number is a multiple of 5 if and only if its last digit is either a zero or a five.

_____

_____

6. Two lines are perpendicular if and only if they intersect to form four right angles.

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7. You live in Washington D.C. if and only if you live in the capital of the United States.

_____

_____

8. Two angles are congruent if and only if they have the same measure.

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