NAME:_____

State the hypothesis and the conclusion of the statement.

1. If a figure is a rhombus, then it has four congruent sides.

2. If a figure is a square, it is a rectangle.

3. Write the statement in if-then form. All scalene triangles have no congruent sides.

4. Write the statement in if-then form. All isosceles triangles have two congruent sides.

5. A TV ad shows a car parked on an isolated point of land obviously high in the mountains. What conditional statement does this ad intend to convey?

6. Rewrite as a conditional. Then write the converse, the inverse, and the contrapositive. A translation is an isometry.

7. A conditional statement and its contrapositive have the same truth value and so are called equivalent statements. What can you say about the inverse and converse of a conditional statement?

8. True or False: In a conditional statement, the hypothesis and conclusion can be interchanged without affecting the validity of the statement.

9. True or False: In a conditional statement, the "if" clause is called the hypothesis.

10. True or False: In a conditional statement, the "then" clause is called the hypothesis.

[1] hyp: A figure is a rhombus; conc: The figure has four congruent sides.

[2] hyp: A figure is a square; conc: The figure is a rectangle.

[3] If a triangle is scalene, then it has no congruent sides.

[4] If a triangle is isosceles, then it has two congruent sides.

[5] Answers may vary. Sample: If you purchase this car, you will be able to do things that no one else can do and go places no one else can go.

[6] Statement: If a motion is a translation, then it is an isometry. Converse: If a motion is an isometry, then it is a translation. Inverse: If a motion is not a translation, then it is not an isometry. Contrapositive: If a motion is not an isometry, then it is not a translation.

[7] The inverse and converse of a conditional statement are also equivalent statements.

[8] false

[9] true

[10] false