Alternative Language for Implications

Implications are not always stated exactly in the form, "If P is true, then Q is true."

The statements given below use alternative language to assert a conditional statement. For each one, determine the **hypothesis** and **conclusion**. Is the statement equivalent to the following statement?

> *If a quadrilateral is a square, then it is a rectangle.*

1. A quadrilateral is a square if it is a rectangle.

2. A quadrilateral is a rectangle whenever it is a square.

3. A quadrilateral is a square provided that it is a rectangle.

4. For a quadrilateral to be rectangle, it is sufficient that it be a square.

5. A quadrilateral being a square is a sufficient condition for it being a rectangle.

6. It is necessary that a quadrilateral be a rectangle for it to be a square.

7. For a quadrilateral to be a rectangle, it is necessary that it be a square.

8. A quadrilateral is a rectangle only if it is a square.

9. A quadrilateral is not a square whenever it is not a rectangle.

Summary

With your group, brainstorm alternative language that is equivalent to saying:

"If **[hypothesis]** then **[conclusion]**."