Geometry   Name: _____
2.1 worksheet #1

Matching the term(s) with the statement it belongs to.

_____1. A conditional statement is a statement that can be written in the form "_____p, _____ q."	A. hypothesis
_____2. The _____ is the part p of the conditional statement following the word *if.*	B. converse
_____3. The _____ is the part q of a conditional statement following the word then.	C. conclusion
_____4. The _____ is the statement formed by negating the hypothesis and the conclusion.	D. if; then
_____5. The _____ is the statement formed by exchanging the hypothesis and the conclusion.	E. inverse
_____6. The contrapositive is the statement formed by both _____ and _____ the hypothesis and the conclusion.	F. negating; exchanging

Underline the hypothesis and circle the conclusion.

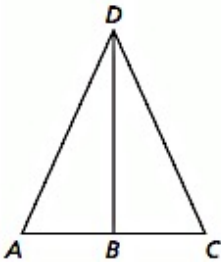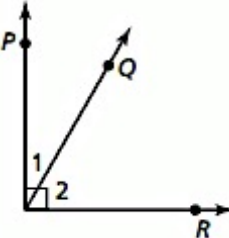|	
7. If you like the ocean, then you are a good swimmer.	**8.** If it is raining outside, then it is cold.
9. If you like to eat, then you are a good cook.	**10.** If an animal is a bear, then it is a mammal.

Rewrite the conditional statement in if-then form.

11. All children must attend school.	12. Congruent angles have equal angle measures.
13. Congruent segments have equal measures.	14. All even numbers are divisible by two.

15. Let p be "you are a baseball player" and q be "you are an athlete." Write each statement in words. Then decide whether it is true or false.

a. the conditional statement $p \rightarrow q$
b. the converse $q \rightarrow p$
c. the inverse $\sim p \rightarrow \sim q$
d. the contrapositive $\sim q \rightarrow \sim p$

Decide whether the statement about the diagram is true. Then, explain your answer using the definitions you have learned.

16. $\overline{AD} \cong \overline{DB}$	17. $\angle 1 + \angle 2 = 90°$

18. Rewrite the definition of the term as a biconditional statement: Obtuse angles are angles with measures greater than 90° and less than 180°.

19. Rewrite the statements as a single biconditional statement: If two angles are supplementary, then the sum of their angle measures is 180°. If the sum of two angles is 180°, then, they are supplementary angles.

20. Rewrite the two statements as a single biconditional statement: A rectangle is a quadrilateral that has all perpendicular sides. If all sides of a quadrilateral are perpendicular, then it is a rectangle.