Practice 4-1 Example Exercises

Example 1

Identify the hypothesis and conclusion in each statement.

- 1. If a polygon is a pentagon, then it has five sides.
- 2. If an angle measures 90, then it is a right angle.
- **3**. If you drop the vase, then it will shatter.
- 4. If an animal is a bird, then it has wings.
- 5. If it says "Mint-a-fresh," then you bought the best toothpaste.

Example 2

Write the converse of each statement.

- 6. If a triangle has three congruent sides, then it is equilateral.
- 7. If two lines do not lie in the same plane, then they are skew lines.
- 8. If he had hurried, then we would not have been late.
- 9. If the weather is good, then she will go jogging.
- 10. If Maria finds a summer job, then she will buy a car.

Example 3

Write the two statements that make up each definition.

- 11. An angle is obtuse if and only if its measure is greater than 90.
- **12**. Two lines are perpendicular if and only if their intersection forms a right angle.
- 13. A quadrilateral is a rectangle if and only if it has four right angles.
- 14. A parallelogram is a rectangle if and only if its diagonals are congruent.
- 15. A triangle is acute if and only if it has three acute angles.

Example 4

Write the inverse and the contrapositive of each statement.

- 16. If it is a weekday, then he must go to school.
- 17. If two angles have the same measure, then they are congruent.
- 18. If I finish the novel by Monday, then I will write the report on Tuesday.
- **19**. If the cat escapes, then the neighborhood dogs howl.
- **20**. If a polygon has ten sides, then it is a decagon.

