In 1 and 2, complete the statements.
1. An if-then statement is also called a ________________________________.
2. In an if-then statement,
   a. the clause following “if” is called the ________________________________.
   b. the clause following “then” is called the ________________________________.

In 3-6, underline the antecedent once and the consequent twice.
3. If wishes were horses, then beggars would ride.
4. Make yourself a sandwich if you’re hungry.
5. If you were perfect, then you would not need an eraser.
6. Take the bus if the car won’t start.

In 7-11: a. Rewrite as a conditional; b. Is the statement true or false?
7. Any dogs in the park must be on a leash.
   a. ________________________________.
   b. Is the statement true or false? ________________________________.
8. Pentagons have five sides.
   a. ________________________________.
   b. Is the statement true or false? ________________________________.
9. All 21-year-olds are eligible to vote.
   a. ________________________________.
   b. Is the statement true or false? ________________________________.
10. It is always cloudy when it rains.
    a. ________________________________.
    b. Is the statement true or false? ________________________________.
11. It is always winter when it snows.
    a. ________________________________.
    b. Is the statement true or false? ________________________________.
In 12-14, a conjecture is given. Determine whether each example is an instance of the conjecture; a counterexample to the conjecture; or neither an instance nor a counterexample to the conjecture.

12. If $t \geq 40$, then $t \geq 41$.
   a. $t = 45$  
   b. $t = 39$  
   c. $t = 40.3$

13. If $u > -5$, then $u$ is positive.
   a. $u = -2$  
   b. $u = -12$  
   c. $u = 4$

14. If a figure has four sides, then it is a rectangle.
   a.  
   b.  
   c.  

In 15-18, answer the question.

15. An ad said, “If you buy a refrigerator before Friday, you’ll receive a $100 rebate.” Danielle bought a refrigerator on Thursday of the same week. What will happen?

16. If you got at least 82% on the last test, your final grade will be an A. You got 89% on the last test. What will happen?

17. If the service at a restaurant is very good, then Lonnie will leave a 20% tip. Today, Lonnie left a 20% tip at the restaurant. Did Lonnie receive good service?

18. An ad said: “If you use our shampoo, your hair will be clean and shiny.” Jessica read the ad and wanted clean and shiny hair. A month later her hair was very clean and quite shiny. Did Jessica use the shampoo?
In 19 and 20, write true, false, or cannot be determined.

19. If a statement is true, its converse is ______________________________.
20. If a statement is false, its converse is ______________________________.

In 21-28, a conditional is given.
   a. Is the conditional true? If not, give a counterexample.
   b. Write its converse.
   c. Is the converse true? If not, give a counterexample.

21. If the light is red, the traffic stops.
   a. ____________________________________________________________
   b. ____________________________________________________________
   c. ____________________________________________________________

22. If \( m > 0 \), then \( m \geq 2 \).
   a. ____________________________________________________________
   b. ____________________________________________________________
   c. ____________________________________________________________

23. If you are in Texas, then you are in Houston.
   a. ____________________________________________________________
   b. ____________________________________________________________
   c. ____________________________________________________________

24. If you are in Nevada, then you are in the United States.
   a. ____________________________________________________________
   b. ____________________________________________________________
   c. ____________________________________________________________
25. If it rains, then you will get wet.
   a. 
   b. 
   c. 

26. If the water boils for 3 minutes, then it boils for 180 seconds.
   a. 
   b. 
   c. 

27. You have more than a dollar if you have eleven dimes.
   a. 
   b. 
   c. 

28. If \( x < 8 \), then \( x < 10 \).
   a. 
   b. 
   c. 

In problem 29, answer the questions.

29. Given the definition: A midpoint of a segment divides a segment into two congruent segments.
   a. Write this statement as a conditional:
      
   b. Write the converse of the conditional written in part a.:
      
   c. Write this definition as a biconditional: