

**1-7****Skills Practice****Logical Reasoning****Identify the hypothesis and conclusion of each statement.**

1. If it is Sunday, then mail is not delivered.
2. If you are hiking in the mountains, then you are outdoors.
3. If  $6n + 4 > 58$ , then  $n > 9$ .

**Identify the hypothesis and conclusion of each statement. Then write the statement in if-then form.**

4. Martina works at the bakery every Saturday.
5. Ivan only runs early in the morning.
6. A polygon that has five sides is a pentagon.

**Determine whether a valid conclusion follows from the statement *If Hector scores an 85 or above on his science exam, then he will earn an A in the class for the given condition.* If a valid conclusion does not follow, write *no valid conclusion* and explain why.**

7. Hector scored an 86 on his science exam.
8. Hector did not earn an A in science.
9. Hector scored 84 on the science exam.
10. Hector studied 10 hours for the science exam.

**Find a counterexample for each statement.**

11. If the car will not start, then it is out of gas.
12. If the basketball team has scored 100 points, then they must be winning the game.
13. If the Commutative Property holds for addition, then it holds for subtraction.
14. If  $2n + 3 < 17$ , then  $n \leq 7$ .