

LESSON
2.2**Practice B***For use with pages 79–85***Rewrite the conditional statement in if-then form.**

1. It is time for dinner if it is 6 P.M.
2. There are 12 eggs if the carton is full.
3. An obtuse angle is an angle that measures more than 90° and less than 180° .
4. The car runs when there is gas in the tank.

Write the converse, inverse, and contrapositive of each statement.

5. If you like hockey, then you go to the hockey game.
6. If x is odd, then $3x$ is odd.

Decide whether the statement is *true* or *false*. If false, provide a counterexample.

7. The equation $4x - 3 = 12 + 2x$ has exactly one solution.
8. If $x^2 = 36$, then x must equal 18 or -18 .
9. If $m \geq A = 122^\circ$, then the measure of the supplement of $\geq A$ is 58° .
10. Two lines intersect in at most one point.

Write the converse of each true statement. If the converse is also true, combine the statements to write a true biconditional statement.

11. If an angle measures 30° , then it is acute.
12. If two angles are supplementary, then their sum is 180° .
13. If two circles have the same diameter, then they have the same circumference.
14. If an animal is a panther, then it lives in the forest.

LESSON
2.2**Practice B** *continued*
*For use with pages 79–85***Rewrite the biconditional statement as a conditional statement and its converse.**

- 15.** Two lines are perpendicular if and only if they intersect to form right angles.
- 16.** A point is a midpoint of a segment if and only if it divides the segment into two congruent segments.

Decide whether the statement is a valid definition.

- 17.** If a number is divisible by 2 and 3, then it is divisible by 6.
- 18.** If two angles have the same measure, then they are congruent.
- 19.** If two angles are not adjacent, then they are vertical angles.

In Exercises 20–22, use the information in the table to write a definition for each type of saxophone.

| Instrument | Frequency (cycles per second) | |
|---------------------------|-------------------------------|------------------|
| | Lower limit (Hz) | Upper limit (Hz) |
| E-flat baritone saxophone | 69 | 415 |
| B-flat tenor saxophone | 103 | 622 |
| E-flat alto saxophone | 138 | 830 |

- 20.** E-flat baritone saxophone
- 21.** B-flat tenor saxophone
- 22.** E-flat alto saxophone

In Exercises 23 and 24, use the information in the table above and the answers to Exercise 20–22.

- 23.** If the frequency of a saxophone was 95 Hz, what could you conclude?
- 24.** If the frequency of a saxophone was 210 Hz, what could you conclude?