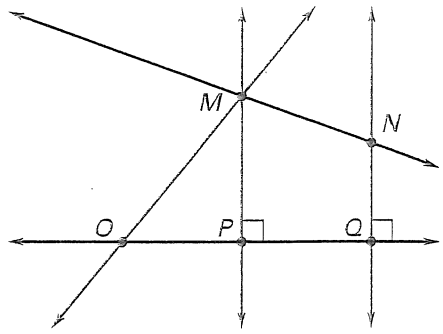
LESSON 2.2

NAME _____ DATE _____

Practice B

For use with pages 79–85

Use the diagram to determine whether the statement is *true* or *false*.



1. Points O, P, and Q are collinear.
2. $\angle MPO$ and $\angle NQP$ are supplementary.
3. Points M, P, and O lie in the same plane.
4. $\overleftrightarrow{MP}$ is perpendicular to $\overleftrightarrow{NQ}$.
5. $\overleftrightarrow{NQ}$ is perpendicular to $\overleftrightarrow{OQ}$.
6. $\angle MPO$ and $\angle MPQ$ are complimentary.
7. Point P is the midpoint of $\overline{OQ}$.

Rewrite the biconditional statement as a conditional statement and its converse.

8. $x = 4$ if and only if $x^2 = 16$.
9. Point Y lies between points X and Z if and only if $XY + YZ = XZ$.
10. The car will run if and only if there is gas in the tank.
11. Two angles are congruent if and only if they have the same measure.
12. An angle is a right angle if and only if it measures 90°.

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

13. If you live in Detroit, then you live in Michigan.
14. If an angle measures 30°, then it is acute.
15. If two angles are supplementary, then their sum is 180°.
16. If two angles are congruent, then they have the same measure.
17. If two angles are vertical angles, then they are not adjacent.

In Exercises 18–20, use the information in the table to write a definition for each type of saxophone.

	Frequency (cycles per second)	
Instrument	*Lower limit*	*Upper limit*
E-flat baritone saxophone	69	416
B-flat tenor saxophone	104	622
E-flat alto saxophone	138	831

18. E-flat baritone saxophone
19. B-flat tenor saxophone
20. E-flat alto saxophone