

Practice B

For use with pages 71–78

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. A number is divisible by 6 if it is divisible by 2 and 3.
4. An obtuse angle is an angle that measures more than 90° and less than 180° .
5. Geometry is offered only during even numbered blocks.

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

6. The equation $4x - 3 = 12 + 2x$ has exactly one solution.
7. If $x^2 = 36$, then x must equal 18 or -18 .
8. Thanksgiving is celebrated on a Thursday.
9. If you visited Springfield, then you've been to Illinois.
10. Two lines intersect in at most one point.

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

11. If you like hockey, then you go to the hockey game.
12. If x is odd, then $3x$ is odd.
13. If $m\angle P = 90^\circ$, then $\angle P$ is a right angle.

Draw a sketch to illustrate each postulate.

14. If two lines intersect, then their intersection is exactly one point.
15. If two points lie in a plane, then the line containing them lies in the plane.
16. If two planes intersect, then their intersection is a line.

Use the diagram to state the postulate(s) that verifies the truth of the statement.

17. The points E , F , and H lie in a plane (labeled R).
18. The points E and F lie on a line (labeled m).
19. The planes Q and R intersect in a line (labeled l).
20. The points E and F lie in a plane R . Therefore, line m lies in plane R .

