

Practice C

For use with pages 71–78

Rewrite the conditional statement in if-then form.

1. I will go to the game if I get all of my homework done.
2. The water will freeze if the temperature is 10°F .
3. A student on the high honor roll has at least a 90 average.
4. Bert goes shopping for groceries only on Wednesday.
5. The number 2 is a factor of every even number.

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

6. The equation $-3x - 10 = 5 + 2x$ has exactly one solution.
7. If $x > 0$, then $x^2 > x$.
8. For any real numbers a and b , $|a + b| = |a| + |b|$.
9. If you visited the Jefferson Monument, then you've been to Washington, D.C.
10. Two collinear rays intersect.

Write the converse, inverse, and contrapositive of each statement. Identify each statment at *true* or *false*.

11. If you like volleyball, then you like to be at the beach.
12. If $4x$ is even, then x is odd.
13. If $m\angle P = 109^{\circ}$, then $\angle P$ is obtuse.

Draw a sketch to illustrate each postulate.

14. A line contains at least two points.
15. Through any three noncollinear points there exists exactly one plane.
16. A plane contains at least three noncollinear points.

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

17. The point A is the intersection of lines l and m .
18. The points A , B , and C lie in a plane (labeled Q).
19. The planes P and Q intersect in a line (labeled l).
20. The points A and B lie on a line (labeled m).

