

## Worksheet 4.1: If-Then Statements

For each exercise below, (a) rewrite the statement in if-then form, and (b) underline the hypothesis once and the conclusion twice.

1. Glass objects are fragile.
2. Numbers that have 2 as a factor are even.
3. FRA students are intelligent.
4. An isosceles triangle has two congruent sides.

Find a counterexample for each statement.

5. If it is not a weekday, then it is Saturday.
6. Odd integers less than 10 are prime.
7. If you play a sport with a bat and a ball, then you play baseball.

8. If you live in a country that borders the United States, then you live in Canada.

For each statement below, write (a) the converse, (b) the inverse, and (c) the contrapositive.

9. If you eat all of your vegetables, then you will grow.

10. If you do not work, then you will get paid.

For each exercise below, (a) write the converse, (b) determine the truth value of the statement and its converse, and (c) if both statements are true, write a biconditional.

11. If a point is in the first quadrant, then its coordinates are positive.

12. If two angles are complementary, then the sum of their measures is 90.