

Name _____

Geometry

HW: 2.2 Worksheet

Identify the hypothesis and conclusion of each conditional.

1. If you are an American citizen, then you have the right to vote.
2. If a figure is a rectangle, then it has four sides.
3. If you want to be healthy, then you should eat vegetables.

Write each sentence as a conditional.

4. A point in the first quadrant has two positive coordinates.
5. Thanksgiving in the United States falls on the fourth Thursday of November.

Determine if the conditional is true or false. If it is false, find a counterexample.

6. If you live in a country that borders the United States, then you live in Canada.
7. If angle measures 80° , then it is acute.
8. If you play a sport with a ball and a bat, then you play baseball.

If the given statement is not in *if-then* form, rewrite it. Write inverse, converse and contrapositive of the given conditional statement. Determine the truth value of all four statements. If a statement is false, give a counterexample.

9. If you are a quarterback, then you play football.

Inverse: _____

Converse: _____

Contrapositive: _____

10. Pianists are musicians.

Conditional: _____

Inverse: _____

Converse: _____

Contrapositive: _____

Given hypothesis (p): "today is Friday" and conclusion (q): "tomorrow is Saturday", then write the following conditional statements and identify them as conditional, inverse, converse or contrapositive.

11. $p \rightarrow q$

12. $\sim p \rightarrow \sim q$

13. $q \rightarrow p$

14. $\sim q \rightarrow \sim p$

Given hypothesis (p): "the sun is out" and conclusion (q): "it is daytime," Identify the following statements as conditional, converse, inverse, or contrapositive statements.

15. If it is daytime, then the sun is out.

16. If the sun is not out, then it is not daytime.

17. If the sun is out, then it is daytime.

18. If it is not daytime, then the sun is not out.

