

Honors Geometry

Name _____

Period _____

Conditional Statement Practice

Identify the hypothesis and the conclusion for each of the following conditional statements:

1. If Lyndsey studies for her test, then she will pass.

Hypothesis: _____ Conclusion: _____

2. If Ben speeds on his motorcycle, then he will get a traffic ticket.

Hypothesis: _____ Conclusion: _____

Rewrite the following as a conditional statement:

3. Hypothesis: you work two hours overtime on your job
Conclusion: you will earn time-and-a-half on your paycheck

Rewrite each statement in "If..., then..." form:

4. A triangle with two equal angles is isosceles.

5. All quadrilaterals have four sides.

6. All cats chase mice.

7. All vertical angles are congruent.

8. Students go to school on weekdays.

Write the converse, inverse, and contrapositive of each of the following statements: Then, state its truth value.

9. If a figure is a hexagon, then it is a polygon.

T/F conv:

T/F inv:

T/F cp:

10. If the flower is a Tulip, then it is yellow.

T/F **conv:**

T/F **inv:**

T/F **cp:**

11. If you live in San Francisco, then you are a Californian.

T/F **conv:**

T/F **inv:**

T/F **cp:**

What conclusions can be reached by each of the following statements?

12. No one who lives in Spain speaks Japanese. Ken speaks Japanese.

13. Equilateral triangles are acute triangles. Acute triangles have three acute angles.

14. Every integer is a rational number. Every rational number is a real number.

Write counterexamples for each of the following statements:

15. Every day of the week has an "R" in it.

16. If it's a planet, then it's smaller than the Earth.

17. If it's a vegetable, then it is not orange.

18. None of the Math teachers' names start with a "O".

Write the converse of each of the following conditional statements, and then write the bi-conditional.

19. If two angles are adjacent, then they share a common ray.

converse: _____.

biconditional: _____.

20. If M is the midpoint of AB, then M is between A and B and $AM = MB$.

converse: _____.

biconditional: _____.