LESSON Practice A

Conditional Statements

Match the correct term to complete each sentence.

- A conditional statement is a statement that can be written in the form "______p, _____q."
- 2. The _____ is the part *p* of a conditional statement following the word *if*.
- 3. The _____ is the part *q* of a conditional statement following the word *then*.
- 4. The _____ is the statement formed by negating the hypothesis and the conclusion.
- 5. The _____ is the statement formed by exchanging the hypothesis and the conclusion.
- The contrapositive is the statement formed by both
 _____ and _____ the hypothesis and the conclusion.

Use the following conditional statement for Exercises 7–12.

If it is a bicycle, then it has two wheels.

- 7. Give the hypothesis of the conditional statement.
- 8. Give the conclusion of the conditional statement.
- 9. "If it has two wheels, then it is a bicycle." Tell whether this is the converse, the inverse, or the contrapositive of the given conditional.
- 10. "If it does not have two wheels, then it is not a bicycle." Tell whether this is the converse, the inverse, or the contrapositive of the given conditional.
- 11. "If it is not a bicycle, then it does not have two wheels." Tell whether this is the converse, the inverse, or the contrapositive of the given conditional.
- 12. Tell which of the original statements, the converse, the inverse, and the contrapositive are true statements. (*Hint:* Can you think of another two-wheeled vehicle?)

Use the following statements for Exercises 13 and 14.

Ella says, "When it rains, I go indoors." Casey replies, "I play in the rain if there is no lightning."

13. Rewrite Ella's statement as an "if, then" statement.

14. Rewrite Casey's statement as an "if, then" statement.

- B. converse
- C. conclusion
- D. if; then
- E. inverse
- F. negating; exchanging

Name		Date Class			
LESSON	Practice B				
1-4	Conditional Statements				
Identify	the hypothesis and conclusion of ea	ach conditional.			
1. If yo	ou can see the stars, then it is night.	2. A pencil writes well if it is sharp.			
Нур	othesis:	Hypothesis:			
Con	clusion:	Conclusion:			
Write a 3. Thre	conditional statement from each of t ee noncollinear points determine a plar	t he following. ne.			

•	Fruit	<u> </u>	 	
	(Kumguats)			

Determine if each conditional is true. If false, give a counterexample.

- 5. If two points are noncollinear, then a right triangle contains one obtuse angle.
- 6. If a liquid is water, then it is composed of hydrogen and oxygen.
- 7. If a living thing is green, then it is a plant.
- 8. "If *G* is at 4, then *GH* is 3." Write the converse, inverse, and contrapositive of this statement. Find the truth value of each.

$$\underbrace{H}_{5}$$

Contrapositive: _____

4

This chart shows a small part of the *Mammalia* class of animals, the mammals. Write a conditional to describe the relationship between each given pair.



9.	primates	and	mammals	
ອ.	primates	anu	manninais _.	 _

10. lemurs and rodents

12.	apes	and	mammals
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