

**Geometry**  
**Ch. 2-3: Lesson #1: Conditional Statements**

Name: \_\_\_\_\_  
 Period: \_\_\_\_\_

**Definition:**

A conditional statement is a logical statement that has \_\_\_\_\_ parts, a \_\_\_\_\_ and a \_\_\_\_\_. When a conditional statement is written in \_\_\_\_\_ form, the “if” part contains the \_\_\_\_\_ and the “then” part contains the \_\_\_\_\_.

**Rewrite each conditional statement in “If-Then” form. Identify the hypothesis and the conclusion.**

All squares have four sides.	The number is divisible by 2 if the number is divisible by 10.
------------------------------	--

**Determine if the following conditional statements are true or false.**

If an animal is a dog then the animal is a reptile. _____ If a number is odd then it is not divisible by 2. _____ If an angle measures 30° then it is obtuse. _____ If the polygon is a rectangle then it has four sides. _____	
--	--

**Core Concept:** There are four conditional statements that can be formed with two simple statements.

	Words	Symbols
<b>Conditional</b>		
<b>Converse</b>		
<b>Inverse</b>		
<b>Contrapositive</b>		

<b>Ex 1:</b>	<b>Given</b> $p$ : “the polygon is a rectangle” $q$ : “the polygon has four sides”	Write each statement and determine if it’s true or false?
Conditional statement: $p \rightarrow q$	Converse Statement: _____	
Inverse statement: _____	Contrapositive Statement: _____	

\*A conditional statement and its contrapositive have the same \_\_\_\_\_.

<b>Ex 2: Given</b> $p$ : “the day is in November” $q$ : “the day is Thanksgiving”		Write each statement and determine if it’s true or false?
Conditional statement: $p \rightarrow q$	Converse Statement: _____	
Inverse statement: _____	Contrapositive Statement: _____	

\*The inverse and the converse of a conditional statement have the same \_\_\_\_\_.

<b>Ex 3: Given</b> $p$ : “the person is a 8 years old” $q$ : “the person is not a teenager”		Write each statement and determine if it’s true or false?
Conditional statement: $p \rightarrow q$	Converse Statement: _____	
Inverse statement: _____	Contrapositive Statement: _____	

<b>Ex 4: Given</b> $p$ : “the angle is not obtuse” $q$ : “the angle measures 30°”		Write each statement and determine if it’s true or false?
Conditional statement: $p \rightarrow q$	Converse Statement: _____	
Inverse statement: _____	Contrapositive Statement: _____	