

## The Converse of Conditional Statements

**Conditional Statement** is a statement that can be written in the form “if  $p$ , then  $q$ ”

Notation for “if  $p$ , then  $q$ ”  $p \rightarrow q$

**Hypothesis**: the portion following the “if” ( $p$ ).

**Conclusion**: the portion following the “then” ( $q$ ).

If a figure is a triangle, then the figure has three sides.

hypothesis,  $p$ : a figure is a triangle

conclusion,  $q$ : the figure has three sides

The **Converse** of  $p \rightarrow q$ , is  $q \rightarrow p$

To create the **Converse** switch the  $p$  and  $q$ .

**Conditional Statement**;  $p \rightarrow q$

If a figure is a triangle, then the figure has three sides.

hypothesis,  $p$ :

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**Converse**;  $q \rightarrow p$

The **Converse** of  $p \rightarrow q$ , is  $q \rightarrow p$   
To create the **Converse** switch the  $p$  and  $q$ .

Write the **Converse** of the following **Conditional Statements**

If  $\angle 1$  and  $\angle 2$  are adjacent angles, then  $\angle 1$  and  $\angle 2$  have a common vertex.

hypothesis,  $p$ :

conclusion,  $q$ :

**Converse;**  $q \rightarrow p$

The **Converse** of  $p \rightarrow q$ , is  $q \rightarrow p$   
To create the **Converse** switch the  $p$  and  $q$ .

Write the **Converse** of the following **Conditional Statements**

If  $\angle 2$  and  $\angle 4$  are vertical angles, then  $\angle 2 \cong \angle 4$ .

hypothesis,  $p$ :

conclusion,  $q$ :

**Converse;**  $q \rightarrow p$

The **Converse** of  $p \rightarrow q$ , is  $q \rightarrow p$   
To create the **Converse** switch the  $p$  and  $q$ .

Write the **Converse** of the following **Conditional Statements**

If  $m\angle ABC = 135^\circ$ , then  $\angle ABC$  is an obtuse angle.

hypothesis,  $p$ :

conclusion,  $q$ :

**Converse**;  $q \rightarrow p$

Determine if the **Converse** of the following **Conditional Statements** is True.  
If not, give a counterexample.

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then  $\angle ABC$  is an obtuse angle.

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Determine if the **Converse** of the following **Conditional Statements** is True.  
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If a figure is a triangle,  
then the figure has three sides.

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**Conditional Statement;**  $p \rightarrow q$   
If a figure is a triangle, then the figure has three sides.  
hypothesis,  $p$ : a figure is a triangle  
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**Converse;**  $q \rightarrow p$   
If the figure has three sides, then a figure is a triangle