**Activity 2.3.5 Converses of Conditional Statements**

A **conditional statement** is a sentence in the form: If \_\_\_\_\_\_\_, then\_\_\_\_\_\_\_\_\_\_.

For example: (A) If a triangle is equilateral, then it is isosceles.

The two parts of a conditional statement are called the **hypothesis** and the **conclusion**.

In the conditional statement above “a triangle is equilateral” is the hypothesis and “it is isosceles” is the conclusion

The converse of a conditional statement is formed when the hypothesis and conclusion switch places. The converse of the statement (A) is (B) If a triangle is isosceles, then it is equilateral.

**Warning:** Just because a conditional statement is true, its converse is not necessarily true.

1. Determine which conditional statements (A) and/or (B) are true. Discuss with your group.

2-10. For each conditional statement (1) determine whether it is generally true, (2) write the converse, and (3) determine whether the converse is generally true.

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| Conditional Statement | True or False? | Converse | True or False? |
| 2. If two sides of a triangle are congruent, then the angles opposite these sides are congruent. |  |  |  |
| 3. If a figure is a triangle, then it is a polygon. |  |  |  |
| 4. If two segments are congruent, then the lengths of the segments are congruent. |  |  |  |
| 5. If you are old enough to get a driver’s license, then you are old enough to vote. |  |  |  |
| Conditional Statement | True or False? | Converse | True or False? |
| 6. If you live in Connecticut, then you live in the United States of America. |  |  |  |
| 7. If a state is east of the Mississippi River, then it is in New England. |  |  |  |
| 8. If *x* + 3 = 5,  then *x* = 2. |  |  |  |
| 9. If the measure of an angle is between 0° and 90°, then the angle is acute. |  |  |  |
| 10. If today is Sunday, then we do not have school today. |  |  |  |

11. Make up a conditional statement for which both the statement and its converse are true.

12. Make up a conditional statement which is true, but whose converse is false.

13. Make up a conditional statement that is false, but whose converse is true.