

Geometry Honors
Conditional Statements Worksheet
A.M.D.G.

Do all work on this sheet directly; it will be part of your notes that you can keep for future reference.

A conditional statement is a statement that expresses a **cause-and-effect** relationship. A conditional statement can be written in “IF-THEN” form, but it does not have to be.

Example:

All of Mr. M’s students love geometry!	...is a conditional statement that is in declarative form.
If you are Mr. M’s student, then you love geometry!	is the same statement in IF-THEN form.

Example:

Mr. M gets mad when he loses at Soul Calibur III.

If Mr. M loses at Soul Calibur III, then he gets mad.

The condition or cause is always the “if” part, and the effect is always the “then” part.

Try the following problems. Convert each statement to “IF-THEN” form. Assume that each statement is true.

- 1) Mr. Castro laughs when his students fail.
- 2) Mr. M writes very hard tests when his students make him mad.
- 3) Mr. Quattrin’s precalc students always weep after his tests.
- 4) All mice have tails.
- 5) Everyone who plays Silent Hill 4 gets scared.

Conditional statements can be used to reach conclusions. Think about the following statement, and assume that it is true.

If an animal is a deer, then it eats lettuce.

Based on the assumption that the above statement is true, discuss in groups which of the following statements must be true and which might not be. Record your decision and your reasons in the area below each statement. Be prepared to discuss this in class.

- 1) If an animal eats lettuce, then it is a deer.
- 2) If an animal is not a deer, then it does not eat lettuce.
- 3) If an animal does not eat lettuce, then it is not a deer.
- 4) All deer eat lettuce.

There are two parts to every conditional statement, the HYPOTHESIS (the “if” part, or the cause) and the CONCLUSION (the “then” part, or the effect).

Example:

If it rains, then I will get wet.

The hypothesis is “it rains”, the conclusion is “I will get wet”.

State the hypothesis and the conclusion for each of the following statements.

- 1) If it snows, people go skiing.
 - a. Hypothesis
 - b. Conclusion
- 2) You waste water when you use a garden hose.
 - a. Hypothesis
 - b. Conclusion