2.3 Conditional Statement : If p then q

OBJ: To distinguish between the hypothesis and conclusion in a conditional statement.

To write a conditional statement, converse statement, biconditional statement and a counter example.

Conditional statement: IF p then q. Converse statement: If q then p

hypothesis conclusion conclusion hypothesis

Ex 1: If a number is a whole number, it is also an integer.

Conditional: If A number is A whole number, then it is AN integer. (TRUE)

Converse: If A number is AN integer then it is a whole #

Counterexample: FALSE

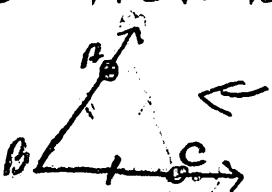
-2 IS AN integer & it is NOT A whole #

Ex 2: If B is the midpoint of AC, AB = BC.

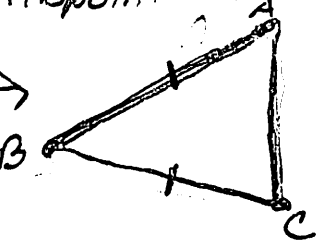
Conditional: If B is the midpoint of AC, the AB=BC (TRUE)

Converse: If AB = BC then B is the midpoint of AC

Counterexample: FALSE



← FALSE →



Ex 3: Congruent segments are segments with equal measures.

Conditional: If segments ARE congruent then they have EQUAL measured. (TRUE)

Converse: If segments have EQUAL measured, then the segments ARE congruent (TRUE)

Counterexample: NONE

* BICONDITIONAL * p iff Q

segments ARE congruent if and only if they have EQUAL measures

You try:

Write the definition of a straight angle as a biconditional.

AN Angle measures 180° if AND only if it IS A straight Angle