

SLO: I can identify the hypothesis & conclusion for a conditional statement and explain why conditional statements are useful in life and in math – especially geometry.

☺☺☺☺ Today is a GREAT day to think mathematically! Let's get organized first. ☺☺☺☺

TABLE OF CONTENTS: **11/5 Conditional Statements**

NEW NOTEBOOK PAGE: **11/5 Conditional Statements - Name**
SLO: I can identify the hypothesis & conclusion for a conditional statement and explain why conditional statements are useful in life and in math – especially geometry.

Assignment Sheet: **11/5 CW: Conditional Statements Due 11/5**
11/5 HW: Conditional Statements Due 11/7

DO NOW SHEET: **Name, Date, Period,**
Copy and complete the statement: "If I am caught with my phone out, then _____"

LESSON: (Record all work in your notebook.)

Notes (Copy into your notebook and draw a box around them)

Vocabulary:

Conditional Statement: "If  then "
(hypothesis) (conclusion)


Conjecture: "If-then" statement written based on observation. Conjectures are unproven ideas.

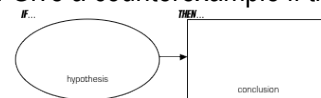
Theorem: "If-then" statement that has been proven

Counter Example: A case when a conditional statement is not true.

For example: If I get up at 6, then I am on time to school.

COUNTER EXAMPLE: I get up at 6 but arrive at school at 7:30 because the bus got a flat tire.

 (1) Copy each statement below into a flowchart diagram like the one below. Give a counterexample if the statement is not always true.



- (a) If your costume is really good, then you get more candy. _____
- (b) If it is Halloween, then it is October 31. _____
- (c) If it gets suddenly colder, then a ghost is present. _____
- (d) If lines are parallel, then corresponding angles are equal. _____
- (e) If a reason seems good, then it must be true. _____

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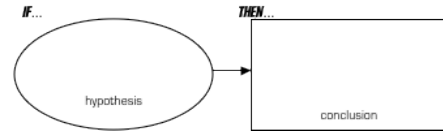



(2) Why are conditional statements important in a court of law? In a scientific experiment?




(3) For each conditional statement below, copy the statement into a flowchart diagram. Give a counterexample if the statement is not always true.

- (a) If $y = 3x + 5$ and $x=4$, then $y = 17$.
- (b) If lines are parallel, then they have the same slope.
- (c) Dogs are happy when they wag their tails.
- (d) If an animal is an armadillo, then it is nocturnal.
- (e) If $y = 1$, then $y^2 = 1$.
- (f) If an angle has a measure less than 90° , then it is acute.
- (g) If x is an even number, then x is divisible by 2.
- (h) Lines are parallel if vertical angles are congruent..
- (i) If a line containing the points $J, K,$ and L lies in plane \mathcal{P} , then $J, K,$ and L are coplanar.
- (j) Congruent segments have equal measures.
- (k) On Tuesday, play practice is at 6:00.



 **HOMEWORK:** Problems under "Monday 11/5" on the homework sheet.

 **BACK OF DO NOW SHEET:** Today my level of understanding is 😊 😐 😞 because _____
 Create a conditional statement (if...then) that is not always true and give a counterexample.

