SLO: I can write conditional statements in a flowchart format and include reasons for each hypothesis and conclusion.

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

TABLE OF CONTENTS: **11/9 Flowchart reasoning**

NEW NOTEBOOK PAGE: **11/9 Flowchart reasoning – Name**
SLO: I can write conditional statements in a flowchart format and include reasons for each hypothesis and conclusion.

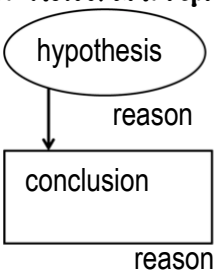
Assignment Sheet: **11/9 CW: Flowchart reasoning Due 11/9**
11/9 HW: Flowchart reasoning Due 11/12

DO NOW SHEET: **Name, Date, Period,**
Write a conjunction that is true and a disjunction that is false.

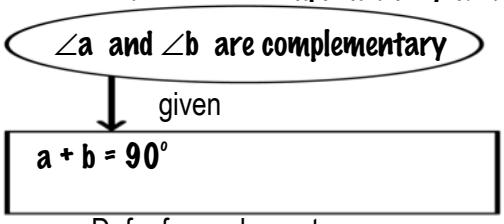
LESSON: (Record all work in your notebook.)

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

Vocabulary: Flowchart: representation of a logical argument with statements and reasons.



Example: If ∠a and ∠b are complementary then a + b = 90°.



Use the reasons below to complete the flowcharts for the conditional statements on the back of this sheet.

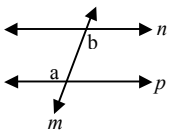
Given
Definition of supplementary
Definition of complementary
Definition of vertical angles
Definition of midpoint
Definition of bisect
Definition of congruent
Definition of right angle
Definition of straight angle
Pythagorean Theorem
Midpoint formula
Alternate Interior Angles Theorem (& converse)
Alternate Exterior Angles Theorem (&converse)
Corresponding Angles Postulate (& converse)
Consecutive Interior Angles Theorem (& converse)

HOMEWORK: Problems under "Friday 11/9" on the homework sheet.

EXIT BACK OF DO NOW SHEET: **Today my level of understanding is ☺😐☹ because _____**
Write a flowchart for: If ∠a ≅ ∠b, then m∠a = m∠b

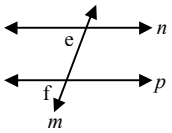
SLO: I can write conditional statements in a flowchart format and include reasons for each hypothesis and conclusion.

1. If $n \| p$, then $\angle a \cong \angle b$.



2. If $\angle c$ is supplementary to $\angle d$ then $c + d = 180°$.

3. If $\angle e \cong \angle f$, then $n \| p$.

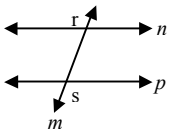


4. If G is the midpoint of $\overline{HI}$, then $\overline{HG} \cong \overline{GI}$.

5. If $\angle j$ is vertical to $\angle k$, then $m\angle j = m\angle k$.

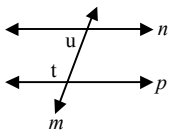
6. If $\angle m$ is a right angle then $m\angle m$ is 90°.

7. If $n \| p$, then $\angle s \cong \angle r$.



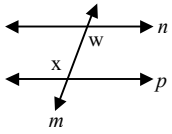
8. If a right triangle has legs *a* and *b* and hypotenuse *c*, then $a^2 + b^2 = c^2$

9. If $n \| p$, then _____.



10. If $\angle v$ is a straight angle, then _____.

11. If $\angle w \cong \angle x$, then ___.

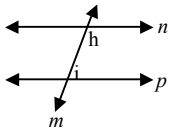


12. If $\overline{YZ}$ bisects $\overline{AB}$ at C, then ___.

13. If $\overline{CD} \cong \overline{EF}$, then___.

14. If $m\angle G$ is 90°, then___.

15. If $n \| p$, then ___.



16. If $\overline{JK}$ has endpoints J(3,7) and K(-4,-3) then midpoint M has coordinates _____.