Name _____ Date _____ Period _____

Theorems of Segment and Angle Congruence // More Flow Chart Proofs

Lesson Objective

Theorem: A theorem is a statement that can be proven.

➔ Once you have proven a theorem, you can use it as a reason in other proofs.

Property of Segment Congruence	Explanation
Reflexive	
Symmetric	
Transitive	

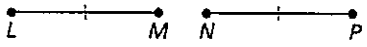
Property of Angle Congruence	Explanation
Reflexive	
Symmetric	
Transitive	

Example

1. Prove the Symmetric Property of Congruence.

Given $\overline{LM} \cong \overline{NP}$

Prove $\overline{NP} \cong \overline{LM}$



Provide reasons for all statements given in the flow chart!

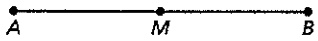
$\overline{LM} \cong \overline{NP}$

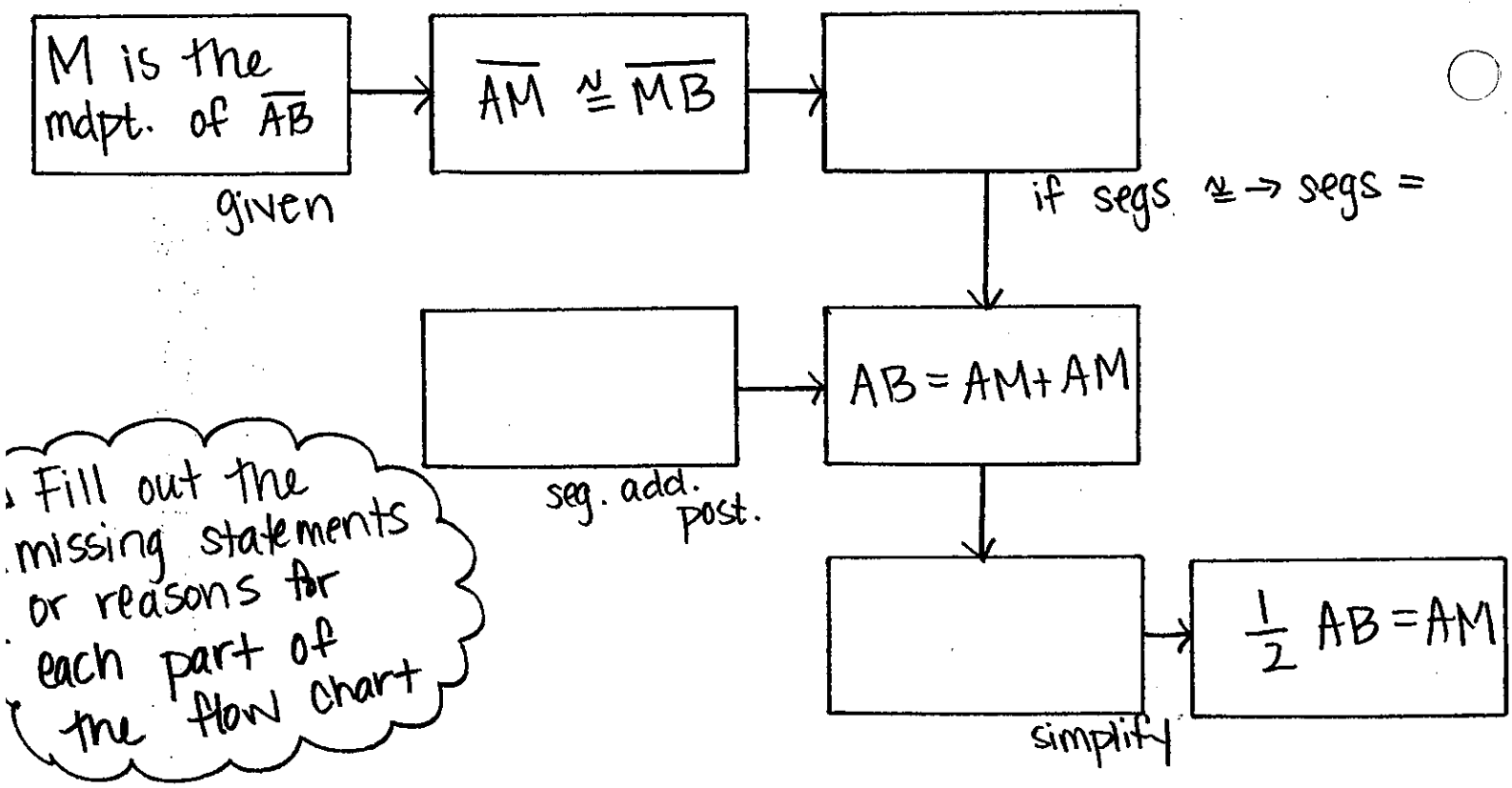
$LM = NP$

$NP = LM$

$\overline{NP} \cong \overline{LM}$

2. Prove this property of midpoints: If you know that M is the midpoint of $\overline{AB}$, prove that AM is one-half the length of AB.





3. Given $\angle 1$ is a complement of $\angle 2$.
   $\angle 2 \cong \angle 3$

   Prove $\angle 1$ is a complement of $\angle 3$.