

# SEGMENT PROOFS

Reference

## Properties of Equality

Addition Property  
Subtraction Property  
Multiplication Property  
Division Property  
Distributive Property

Substitution Property  
Reflexive Property  
Symmetric Property  
Transitive Property

**The properties above may only be used with EQUAL signs.**  
The properties of congruence below can be applied to statements with congruence symbol.

## Properties of Congruence

Reflexive Property  
of Congruence

For any segment  $AB$ , \_\_\_\_\_.

Symmetric Property  
of Congruence

If \_\_\_\_\_, then \_\_\_\_\_.

Transitive Property  
of Congruence

If \_\_\_\_\_ and \_\_\_\_\_,  
then \_\_\_\_\_.

## Definitions

Definition of  
Congruence

Segments are congruent if and only if  
they have the same measure:

If \_\_\_\_\_, then \_\_\_\_\_.

If \_\_\_\_\_, then \_\_\_\_\_.

Definition of  
Midpoint

The midpoint of a segment divides the segment  
into two congruent parts (equal lengths).

If  $M$  is the midpoint of  $\overline{AB}$ ,

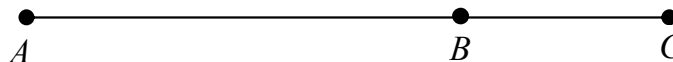


then \_\_\_\_\_.

## Postulates

Segment Addition  
Postulate

If  $A$ ,  $B$ , and  $C$  are collinear points and  $B$  is between  $A$  and  $C$ ,



then \_\_\_\_\_.