

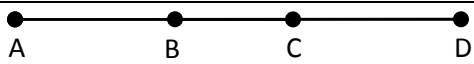
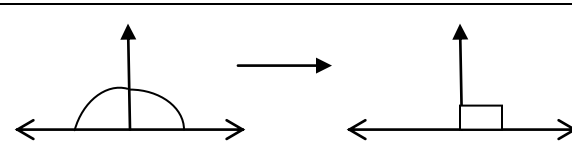
Name _____

Date _____

Reasons used in Proofs - Unit 2

Properties	
Addition Property of Equality	Subtraction Property of Equality
Multiplication Property of Equality	Division Property of Equality
Simplification	Substitution
Reflexive Property: $a=a$; $AB = AB$; $m\angle A = m\angle B$; $\overline{AB} \cong \overline{AB}$; $\triangle ABC \cong \triangle ABC$	
Symmetric Property: if $9 = x$, then $x = 9$	
Transitive Property: if $a=b$ and $b=c$, then $a = c$; if $m\angle A = m\angle B$ and $m\angle B = m\angle C$, then $m\angle A = m\angle C$	

Definitions	
** Vertical Angles	Non-adjacent \angle s formed by intersecting lines are vertical \angle s
** Adjacent Angles	$2\angle$ s that share a vertex and a common sides but no interior points are adjacent
** Linear Pair	2 adjacent \angle s whose non-common sides form opposite rays are a linear pair
Supplementary Angles	2 \angle s the sum of whose measures is 180° are supplementary angles
Complementary Angles	2 \angle s the sum of whose measures is 90° are complementary angles
Right Angle	Right $\angle \leftarrow \rightarrow \angle$ that measures 90°
Angle Bisector	\angle bisector $\leftarrow \rightarrow 2 \cong \angle$ s
Congruent Angles	$\cong \angle$ s $\leftarrow \rightarrow \angle$ s with = measure
Congruent Segments	\cong segments $\leftarrow \rightarrow$ segments with = measure
Midpoint	midpoint $\leftarrow \rightarrow 2 \cong$ segments
Segment Bisector	Segment bisector $\leftarrow \rightarrow 2 \cong$ segments

Postulates & Theorems	
Segment Addition Postulate	Angle Addition Postulate
Right Angle Congruence Thm: All right \angle s are \cong	Vertical Angles Theorem: Vertical \angle s are \cong
Congruent Supplements Thm • Supplements of $\cong \angle$ s are \cong • Supplements to the same \angle are congruent	Congruent Complements Thm • Complements of $\cong \angle$ s are \cong • Complements to the same \angle are congruent
Common Segments/Angle Thm (Need 3 all steps)	
$\overline{AC} \cong \overline{BD}$ Given Big \rightarrow Little $\overline{BC} \cong \overline{BC}$ Reflexive $\overline{AB} \cong \overline{CD}$ Common Seg Thm	$\overline{AB} \cong \overline{CD}$ Given Little \rightarrow Big $\overline{BC} \cong \overline{BC}$ Reflexive $\overline{AC} \cong \overline{BD}$ Common Seg Thm
Linear Pair Theorem: $2\angle$ s form linear pair \rightarrow supplementary angles	
$\cong \angle$ s supplementary \rightarrow right \angle s	

**can be observed in the diagram and stated as such by "definition of _____ angles"