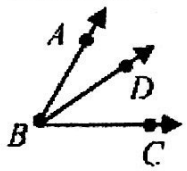
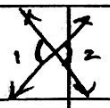
Angle Proofs Reference

Properties of Equality		Properties of Congruence
Addition Property Subtraction Property Multiplication Property Division Property Distributive Property	Substitution Property Reflexive Property Symmetric Property Transitive Property	Reflexive Property Symmetric Property Transitive Property

Definitions	
Definition of Congruence (change = ↔ ≅)	$m\angle A = m\angle B \leftrightarrow \angle A \cong \angle B$
Definition of Angle Bisector	An angle bisector divides an angle into two equal parts.
Definition of Complementary Angles	Complementary ↔ Sum is 90°.
Definition of Supplementary Angles	Supplementary ↔ Sum is 180°.
Definition of Perpendicular ⊥	Perpendicular lines form right angles.
Definition of a Right Angle	A right angle = 90°.

Postulates	
Angle Addition Postulate	 $m\angle ABD + m\angle DBC = \angle ABC$
Linear Pair Postulate	If two angles form a linear pair, then they are supplementary.

linear pair → supplementary

Theorems	
Vertical Angles Theorem 	If two angles are vertical, then they are congruent.
Congruent Complements Theorem	If $\angle A$ is complementary to $\angle B$ and $\angle C$ is complementary to $\angle B$, then $\angle A \cong \angle C$
Congruent Supplements Theorem	If $\angle A$ is supplementary to $\angle B$ and $\angle C$ is supplementary to $\angle B$, then $\angle A \cong \angle C$

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