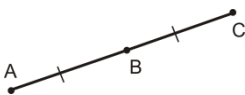

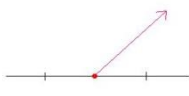
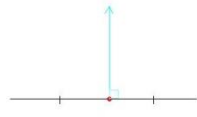
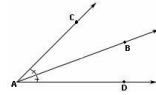
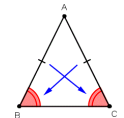
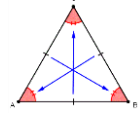
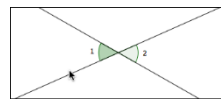
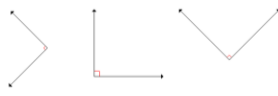

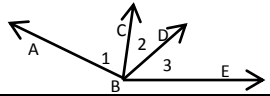


Ways to Get Congruent Sides & Angles

Term	Sides	Angles	Sketch/Example	Reason
Midpoint	x			Definition: A midpoint divides a segment into two equal, \cong parts.
Reflexive Property	x	x		Property: An object (segment or angle) is always \cong to itself.
Transitive Property	x	x	If $\overline{AB} \cong \overline{CD}$ and $\overline{CD} \cong \overline{EF}$, then $\overline{AB} \cong \overline{EF}$. If $\angle A \cong \angle B$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$.	Property: If two objects are \cong to the same thing, they must be \cong too.
Segment Bisector	x			Definition: A segment bisector is a ray, line, or segment that divides a segment into two equal, \cong parts.
Perpendicular Bisector	x	x		Definition: A \perp bisector is a ray, line or segment that divides a segment into two equal, \cong parts and also creates right angles.
Angle Bisector		x		Definition: An angle bisector divides an angle into two equal, \cong adjacent angles.
Isosceles Triangle	x	x		Definition: Isosceles triangles have a pair of \cong sides. Theorem: Across from \cong sides in a triangle are \cong angles.
Equilateral Triangle	x	x		Definition: Equilateral triangles have all three sides \cong . Theorem: Equilateral triangles are also equiangular \rightarrow all angles are \cong (60°)
Vertical Angles		x		Theorem: Vertical angles are \cong
Right Angles		x		Theorem: All right angles are \cong
Overlapping Segments Theorem	x		If $\overline{AB} \cong \overline{CD}$, then $\overline{AC} \cong \overline{DB}$. 	Theorem: If the two outer segments are \cong , then the overlapping segments are \cong . Converse is true as well.
Overlapping Angles Theorem		x	If $\angle 1 \cong \angle 3$, then $\angle ABD \cong \angle CBE$. 	Theorem: If the two outer angles are \cong , then the overlapping angles are \cong . Converse is true as well.