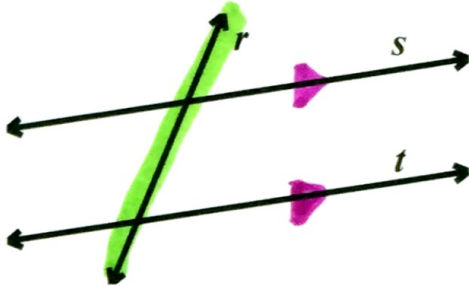
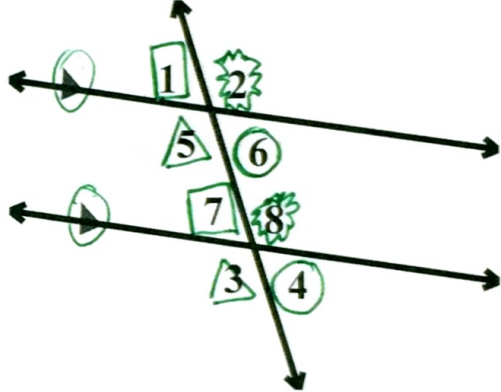
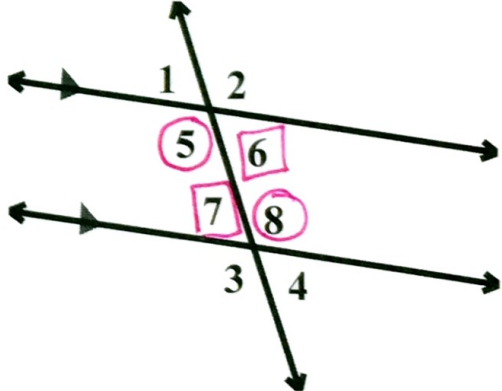
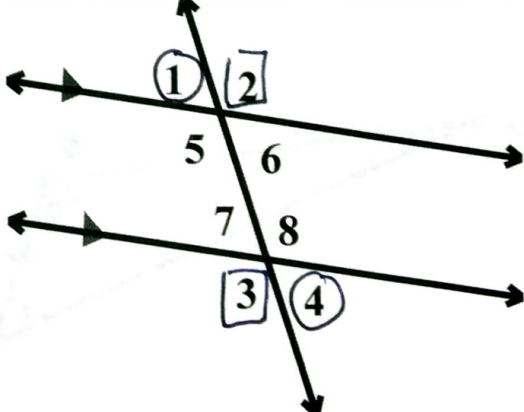


Vocabulary	Picture
<p>Parallel Lines and Transversal:</p> <p>▶ Lines are parallel</p>	
<p>Corresponding Angles:</p> <p><math>\angle 6 \cong \angle 4</math>  <math>\angle 1 \cong \angle 7</math>  <math>\angle 5 \cong \angle 3</math>  <math>\angle 2 \cong \angle 8</math></p>	
<p>Alternate Interior Angles:</p> <p><math>\angle 5 \cong \angle 8</math>  <math>\angle 6 \cong \angle 7</math></p>	
<p>Alternate Exterior Angles:</p> <p><math>\angle 1 \cong \angle 4</math>  <math>\angle 2 \cong \angle 3</math></p>	

Determine whether the given angle pair is *corresponding*, *alternate interior*, *alternate exterior*, *vertical*, or *neither*.

Ex. 1:  $\angle 3$  and  $\angle 7$  corr.

Ex. 2:  $\angle 4$  and  $\angle 10$  alt. ext.

Ex. 3:  $\angle 5$  and  $\angle 8$  neither

Ex. 4:  $\angle 8$  and  $\angle 6$  alt int

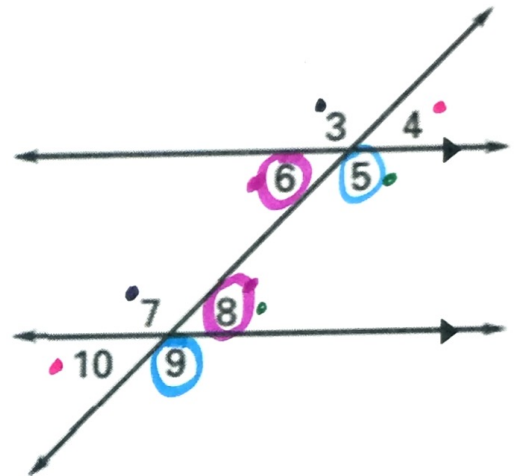
Ex. 5:  $\angle 9$  and  $\angle 5$

Ex. 6:  $\angle 5$  and  $\angle 7$

Ex. 7:  $\angle 4$  and  $\angle 6$

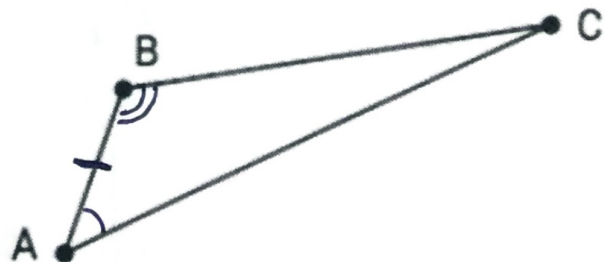
Ex. 8:  $\angle 10$  and  $\angle 3$

Ex. 9:  $\angle 9$  and  $\angle 7$

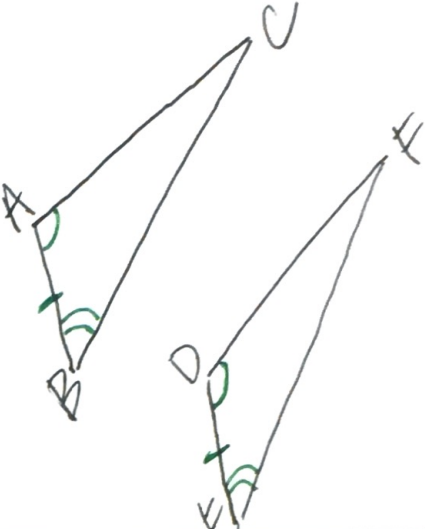
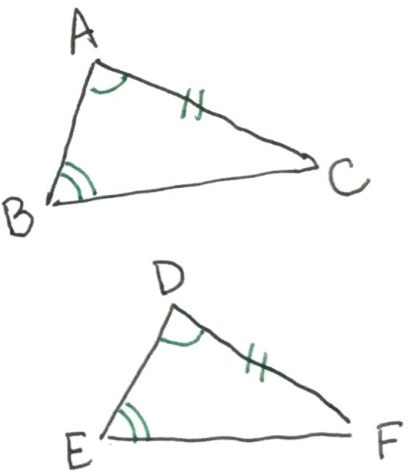
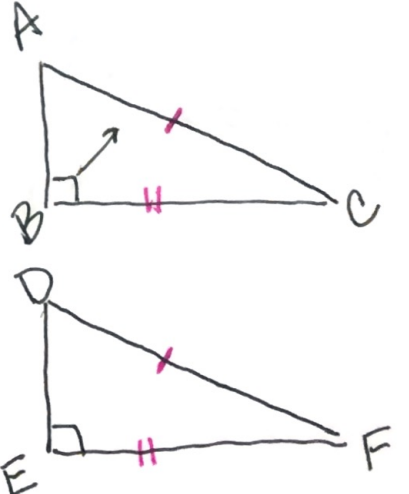


**Included Side:**

a side that is sandwiched between 2 angles.

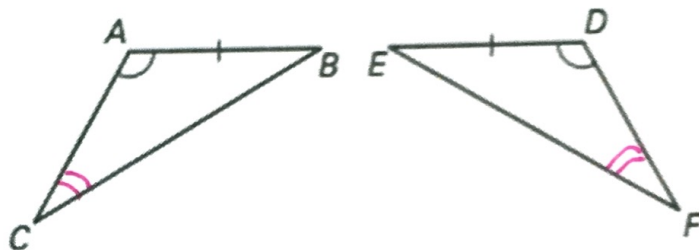
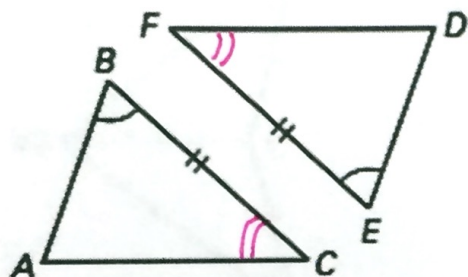




Postulate/Theorem	Picture
<p><b>Angle-Side-Angle (ASA) Congruence Postulate:</b></p> <p>No skipping order matters</p>	
<p><b>Angle-Angle-Side (AAS) Congruence Theorem:</b></p> <p>okay to skip</p> <p>2 angles &amp; a side on the outside of the <math>\angle</math>s</p>	
<p><b>Hypotenuse-Leg (HL) Congruence Theorem:</b></p> <p>Right <math>\Delta</math>s</p> <p>Hypotenuse &amp; one other side</p>	

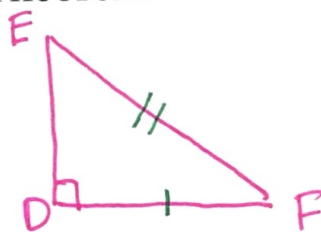
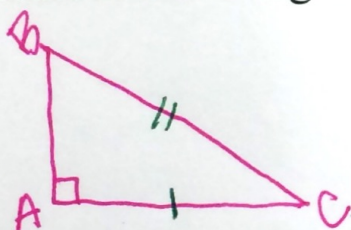
State the third congruence that must be given to prove that  $\triangle ABC \cong \triangle DEF$ , using the indicated postulate or theorem.

Ex. 10: ASA Congruence Postulate      Ex. 11: AAS Congruence Theorem



Ex. 12: Given:  $\overline{AC} \cong \overline{DF}$ ,  $\angle A \cong \angle D$

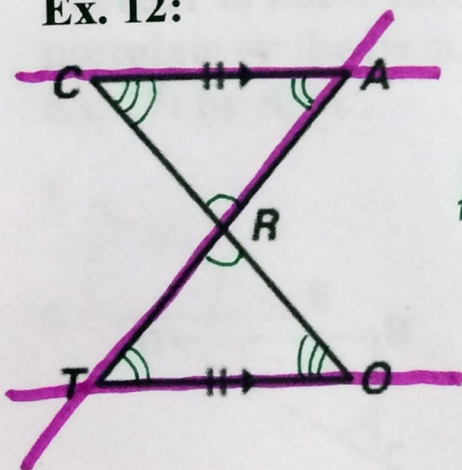
Method: HL Congruence Theorem



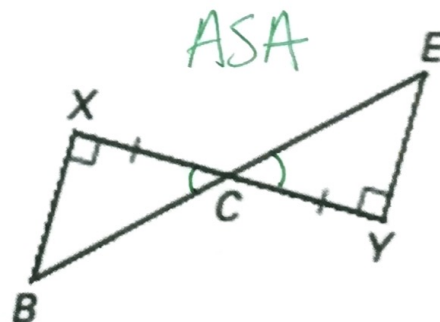
Is it possible to prove that the triangles are congruent? If so, state the postulate or theorem you would use. Explain your reasoning.

Ex. 12:

Ex. 13:



AAS  
or  
ASA



ASA

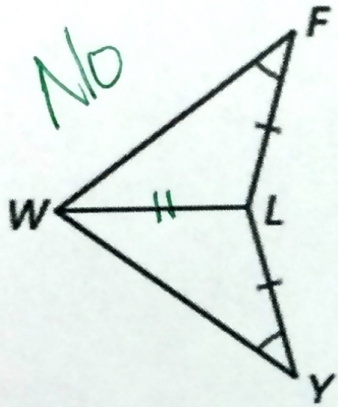
Shared side  
vertical angles

If ~~the~~ sides are  $\parallel$ , look for  
corr  
alt int



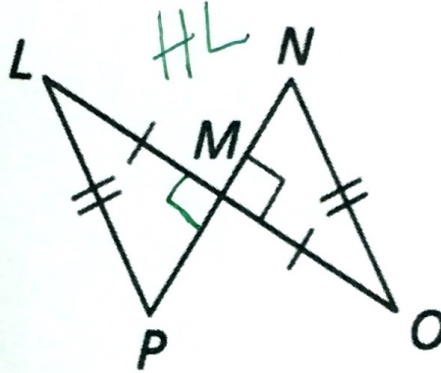
Is it possible to prove that the triangles are congruent? If so, state the postulate or theorem you would use. Explain your reasoning.

Ex. 14:



No

Ex. 15:



HL

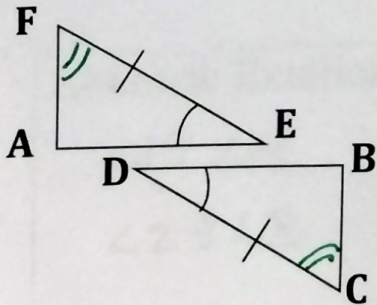
Ex. 16:



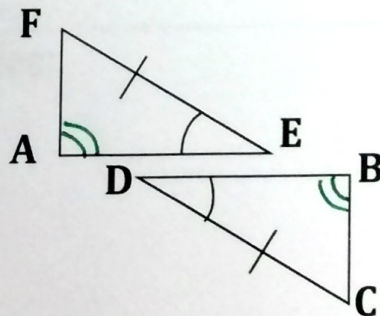
AAS

In each of the following pairs of triangles, add the required markings in order to know that the triangles are congruent by the given postulate or theorem.

Ex. 17: by ASA



Ex. 18: by AAS



Ex. 19: by HL

