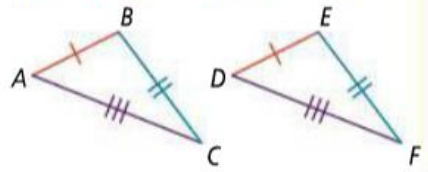


Triangle Congruence Theorems

Side – Side – Side Postulate (SSS)

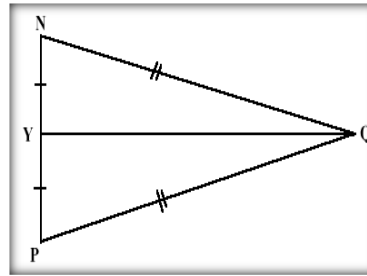
If ...

$$\overline{AB} \cong \overline{DE}, \overline{BC} \cong \overline{EF}, \overline{AC} \cong \overline{DF}$$



Then ...

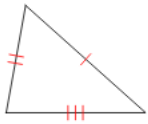
$$\triangle ABC \cong \triangle DEF$$



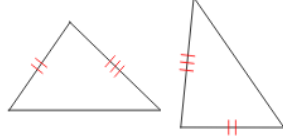
Reflexive Property!

State if the two triangles are congruent and how.

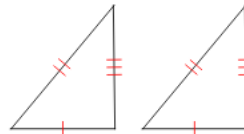
1)



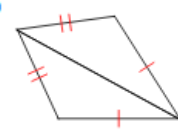
2)



4)



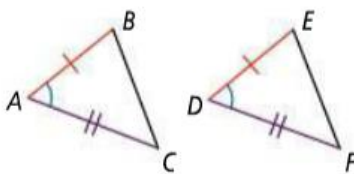
6)



Side – Angle – Side Postulate (SAS)

If ...

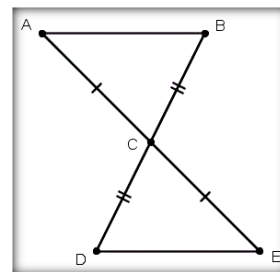
$$\overline{AB} \cong \overline{DE}, \angle A \cong \angle D, \overline{AC} \cong \overline{DF}$$



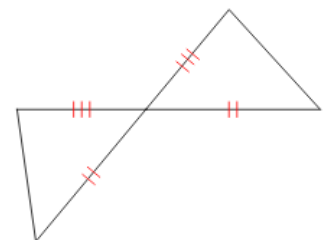
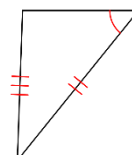
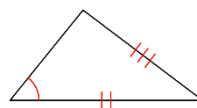
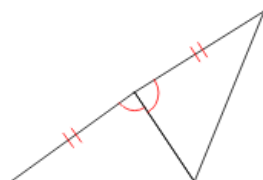
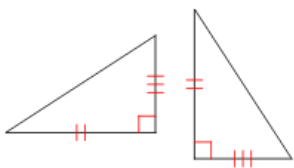
Then ...

$$\triangle ABC \cong \triangle DEF$$

Vertical Angle Theorem!



State if the two triangles are congruent and how.

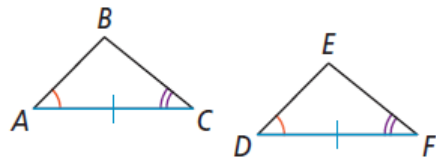


Angle – Side – Angle Postulate (ASA)

If ...

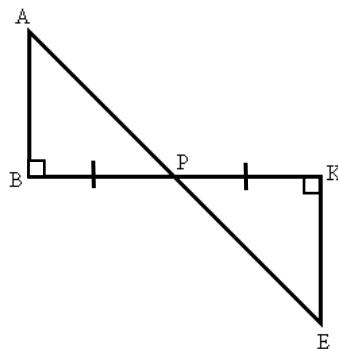
$$\angle A \cong \angle D, \overline{AC} \cong \overline{DF},$$

$$\angle C \cong \angle F$$

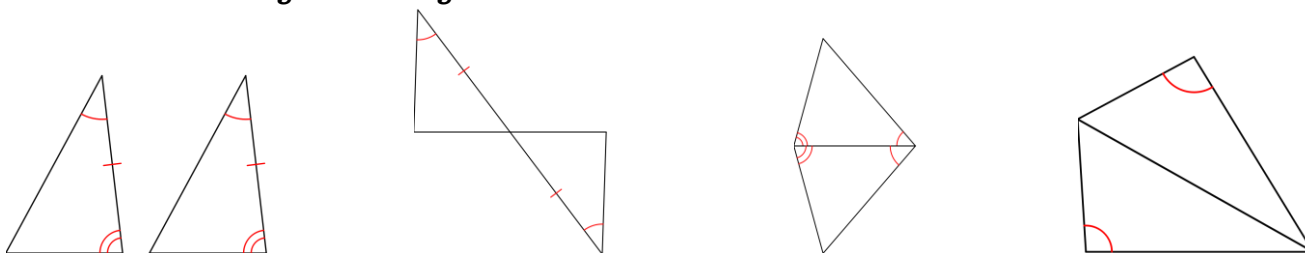


Then ...

$$\triangle ABC \cong \triangle DEF$$



State if the two triangles are congruent and how.

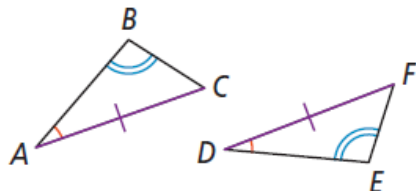


Angle – Angle – Side Theorem (AAS)

If ...

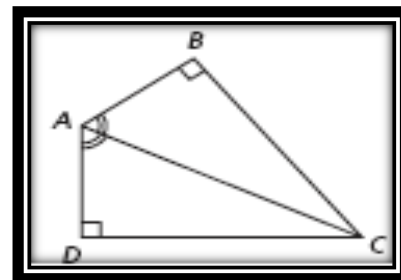
$$\angle A \cong \angle D, \angle B \cong \angle E,$$

$$\overline{AC} \cong \overline{DF}$$



Then ...

$$\triangle ABC \cong \triangle DEF$$



State if the two triangles are congruent and how.

