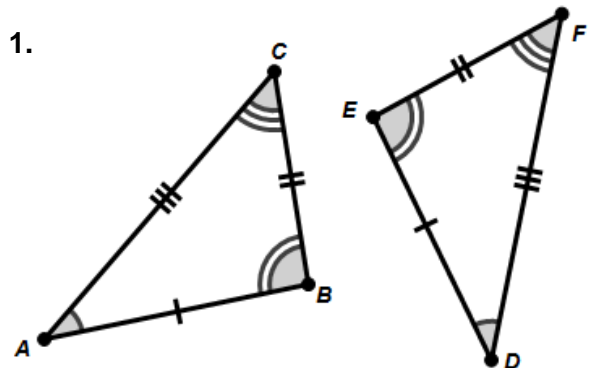


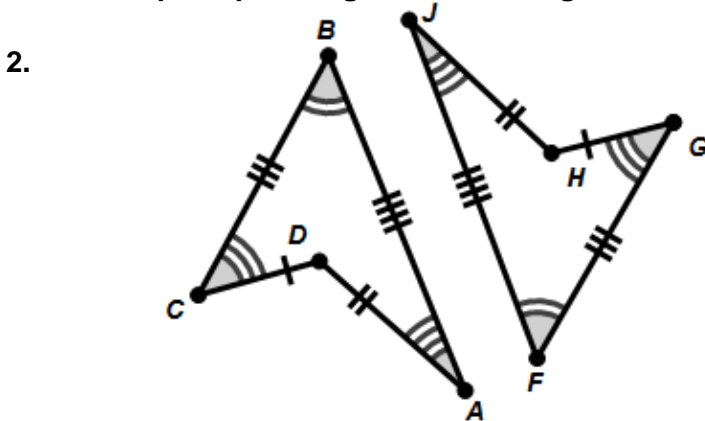
**Sec 1.7 Geometry – Congruence**

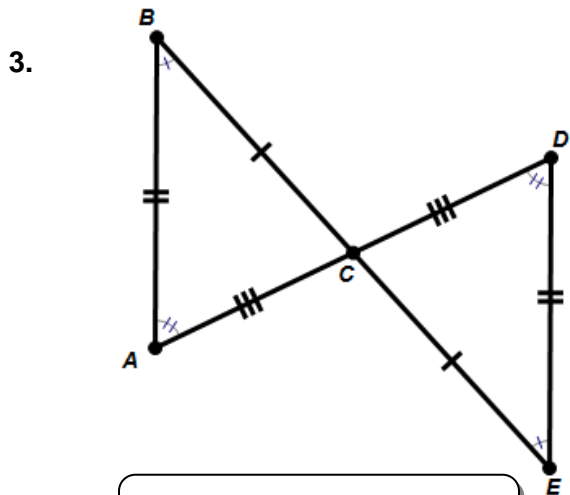
Name: \_\_\_\_\_

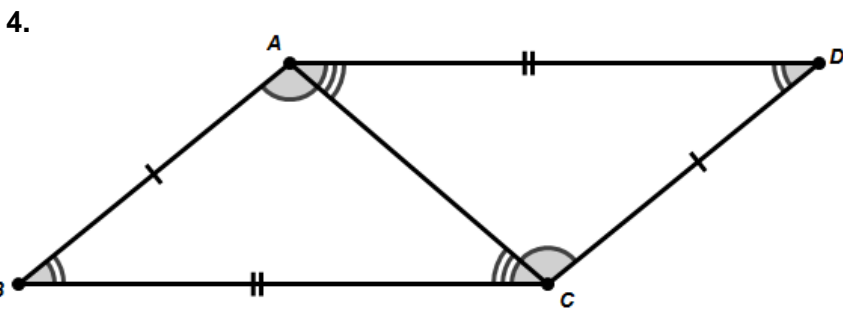
Any two congruent figures can be mapped onto one another using a series of rigid or isometric transformation (reflections, rotations, and translations). – See GSP Lab (Transformations) –

Each of the following pairs of figures shown below are congruent. Write a congruence statement for each and tell whether or not a reflection would be needed to map the pre-image onto the image.



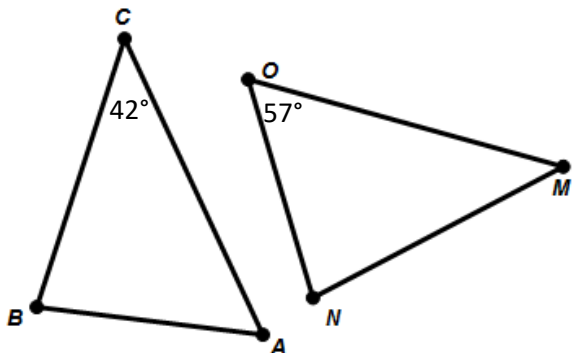




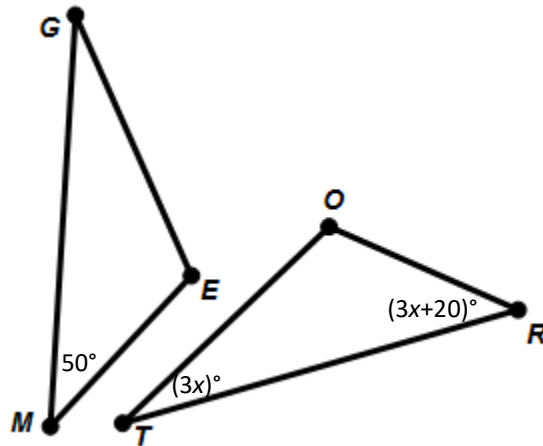



Given the following congruencies find the requested unknown angle.

5.  $\triangle ABC \cong \triangle ONM$

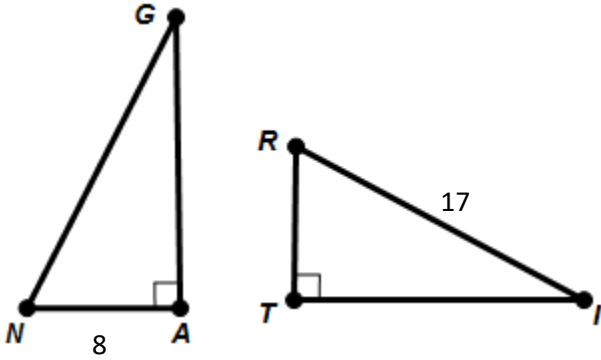



6.  $\triangle GEM \cong \triangle TOR$



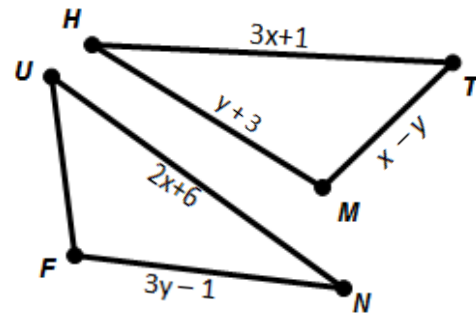
Given the following congruencies find the requested unknown side.

7.  $\triangle TRI \cong \triangle ANG$



$GN =$

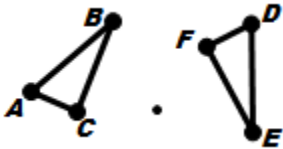
8.  $\triangle MTH \cong \triangle FUN$



$UF =$

The following pairs of triangles are congruent. Provide a suggested transformation or series of transformations that can map one triangle onto the other congruent triangle. (In each diagram  $\triangle ABC \cong \triangle DEF$ )

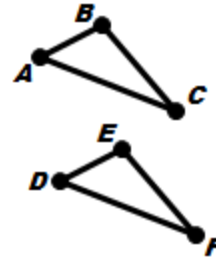
9.



Circle which transformation(s) could be used to map  $\triangle ABC$  onto  $\triangle DEF$ .

Translation	Reflection
Rotation	Dilation

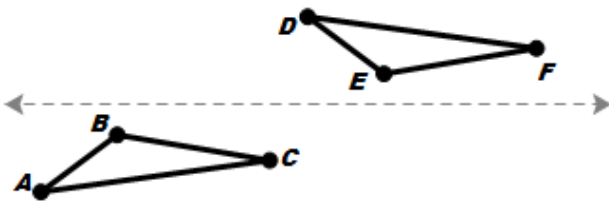
10.



Circle which transformation(s) could be used to map  $\triangle ABC$  onto  $\triangle DEF$ .

Translation	Reflection
Rotation	Dilation

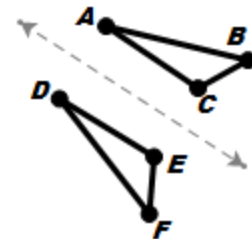
11.



Circle which transformation(s) could be used to map  $\triangle ABC$  onto  $\triangle DEF$ .

Translation	Reflection
Rotation	Dilation

12.



Circle which transformation(s) could be used to map  $\triangle ABC$  onto  $\triangle DEF$ .

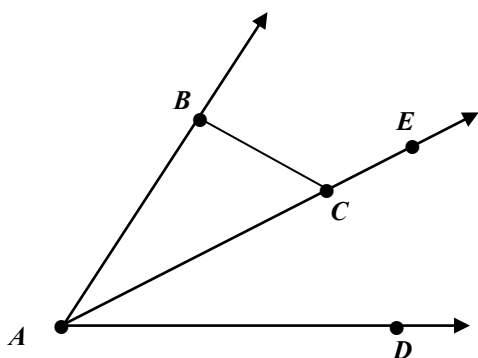
Translation	Reflection
Rotation	Dilation

Angle Puzzles. (angles are not drawn to scale)

9. Find  $m\angle BCE$

Given:

- $\overrightarrow{AC}$  bisects  $\angle DAB$
- $m\angle DAB = 50^\circ$
- $\angle ABC$  is a right angle

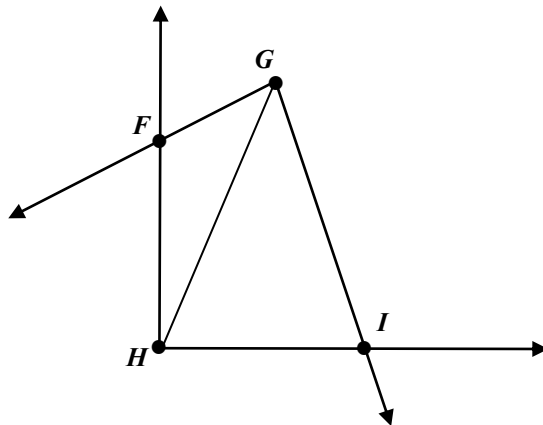


$m\angle BCE =$

10. Find  $m\angle GFH$

Given:

- $\overline{GH}$  bisects  $\angle FGI$
- $m\angle FGI = 60^\circ$
- $m\angle GIH = 75^\circ$
- $\angle FHI$  is a right angle



$m\angle GFH =$