Chapter 9

Lesson 4

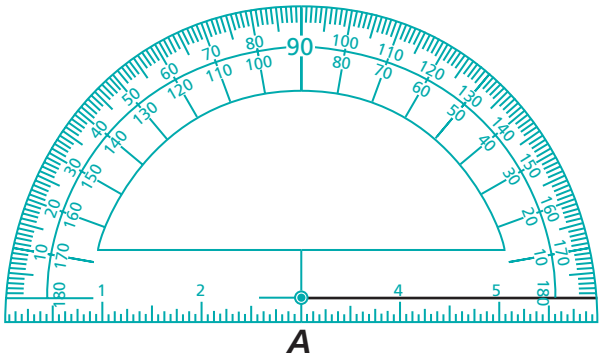
Name _____ Date _____

Constructing Similar Triangles

NCTM Standards 3, 4

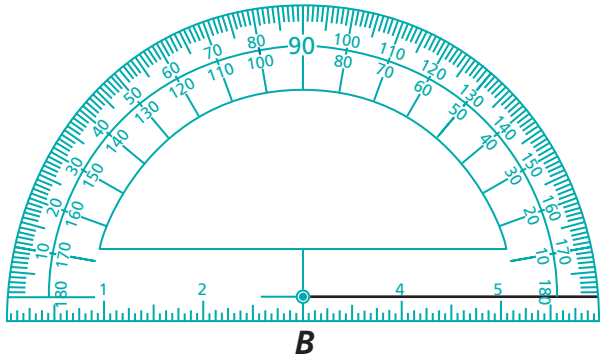
Use a straightedge to draw a line to make the angles.

1



measure of ∠***A***: 60°

2



measure of ∠***B***: 45°

Use a protractor and straightedge to draw the angles.

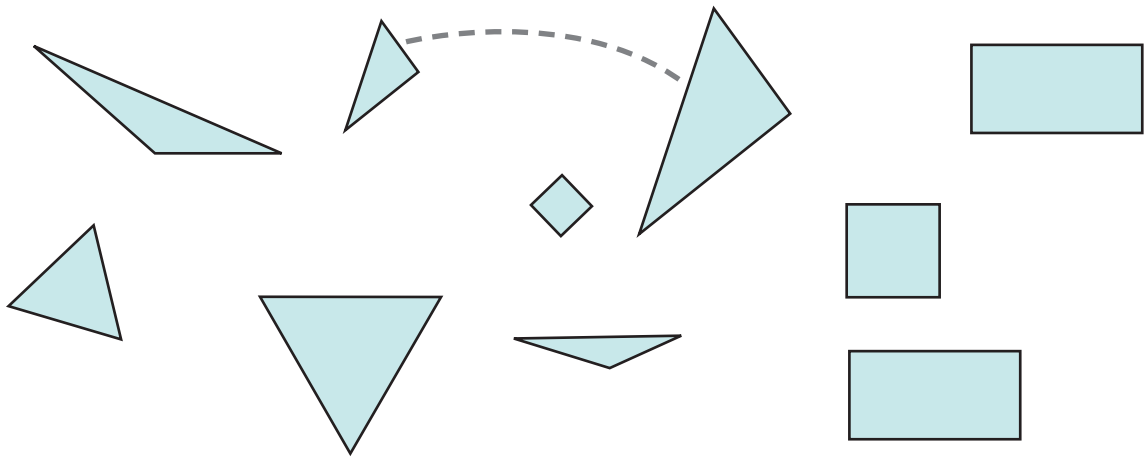
3 ∠***X*** measures 30°.

X

4 ∠***Y*** measures 120°.

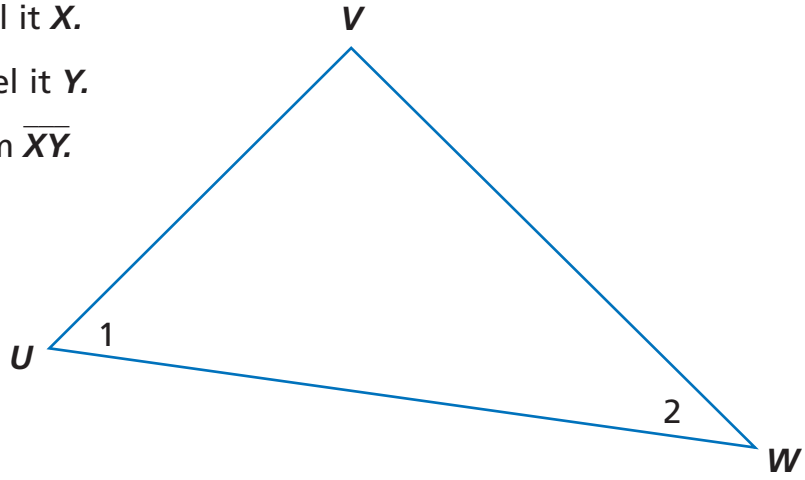
Y

5 Draw lines to match similar figures.



Use a ruler with this triangle to do the following.

6. Find the midpoint of $\overline{UV}$. Label it ***X.***
7. Find the midpoint of $\overline{VW}$. Label it ***Y.***
8. Connect the midpoints to form $\overline{XY}$.
9. Label the angles in $\triangle XVY$ as angles **3, 4** and **5.**



Use the triangles above to answer the following.

10. What angle is congruent to $\angle$**1?** _____

11. What angle is congruent to $\angle$**2?** _____

12. Identify a triangle similar to $\triangle UVW$. _____

13. Add two more line segments so that there are four triangles all congruent to $\triangle XVY$ inside $\triangle UVW$.

14. **Challenge** Draw $\triangle BDA$ with the following measures:

Name	Measure
$\overline{BA}$	about **10 cm**
$\overline{BD}$	about **7 cm**
$\angle B$	about **45°**