

Name: _____ Date: _____ Period: _____

Unit 8 Day 2 - Triangle Congruence #2 Classwork

You have been given some new triangles to create for the stained glass windows. Once again you wonder if a friend helps you create the triangles, will all of their triangles be congruent to yours?

Before constructing the triangle, **make a rough sketch** and name the 3-letter combination that is given. Then construct the triangle **on the back**, or another sheet of paper.

1. Draw $\triangle BUG$ with angles of $m\angle B = 45^\circ$, $m\angle U = 30^\circ$, and $m\angle G = 105^\circ$.
2. Draw $\triangle ABC$ with $m\angle A = 65^\circ$, $m\angle C = 50^\circ$, and $AC = 8$ cm.
3. Draw $\triangle BAD$ with $BA = 6$ cm, $m\angle A = 45^\circ$, and $m\angle D = 35^\circ$.
4. Draw $\triangle EFG$ with a hypotenuse \overline{FG} of 5 cm and a leg \overline{EG} of 4 cm.
5. Draw $\triangle TAD$ with $TA = 7$ cm, $m\angle T = 30^\circ$ and $AD = 4$ cm.
6. Which of the triangles above are congruent to the triangles of your classmates? Will they always be congruent? How would you know?
7. What are all of the 3-letter rules we can use to guarantee two triangles will be congruent?
(hint: there are four)
8. A congruence statement for two triangles is $\triangle DOG \cong \triangle CAT$. List all six corresponding parts.