Name: _____ Date: _____ Period: _____

Unit 8 Day 1 Triangle Congruence # 1 Classwork

You have been given the task of creating triangles for a stained glass window. However you have several triangles to make, so you want to get some help. If someone else helps you make the triangles will the triangles be congruent to the ones you are making? You decide to have some friends draw the different triangles and see if they are congruent to the triangles you are drawing.

Here are the triangles you have been given. First draw a rough sketch of each one, including labels. Then on the back of this paper, construct each triangle. Determine if any of the triangles must be congruent to triangles drawn by your friends. If it is impossible to draw the given triangle, explain why.

1.   Draw △GHI with side lengths of GH = 5 cm, GI = 8 cm, and HI = 10 cm.

2.   Draw △ABC with AB =7 cm, m∠A = 65º, and m<B = 50°.

3.   Draw △QRS with QR =9 cm, m∠R = 70º, and RS = 6 cm.

4.   Draw △EFG with EF =8 cm, m∠E = 40º, and FG = 6 cm.

5.   Draw △MNO with side lengths of ON = 6 cm, MO = 2 cm and MN = 3 cm.

6. Draw △BAD with BA = 3 cm and m∠A = 35 º.

7. Draw △JKL with JK = 6 cm and KL = 5 cm.

8.   Which of the triangles above MUST be congruent to the triangles of your classmates? Will they always be congruent? How would you know?

9. Listed below are all the combinations of sides or angles that you may be given when asked to construct a triangle. Circle those that will FORCE congruence; in other words, the triangle you make will be congruent to the one your friend makes, no matter what.

SSS   SAS   ASA   SSA   AAS   AAA