

Triangle Congruence with Spaghetti

Given the following conditions, can you make a triangle in more than one way? (*What does it mean if you can only make a triangle in one way?*)

Use your protractor to measure the given angles (when not provided) and spaghetti pieces cut to the given lengths to determine if the congruence “shortcut” works. (Sketch each triangle after you have made it with spaghetti.)

Angle-Angle-Angle (AAA) # triangles made _____ does this shortcut “work”? _____

20°, 70°, 90°

Side-Side-Side (SSS) # triangles made _____ does this shortcut “work”? _____

3in, 4in, 5in

Angle-Side-Angle (ASA)

40°, 4 in, 60°

triangles made _____ does this shortcut "work"? _____

Side-Angle-Side (SAS)

4 in, 70°, 5 in

triangles made _____ does this shortcut "work"? _____

Side-Side-Angle (SSA)

1 in, 2 in, 20°

triangles made _____ does this shortcut "work"? _____

Angle-Angle-Side (AAS)

30° , 50° , 5 in

triangles made _____ does this shortcut "work"? _____

Identify your corresponding sides and then state what postulate you would use to prove the triangles congruent.

