



Problem 1 – Exploring the Angle-Angle-Angle Relationship

The Angle-Angle-Angle (AAA) relationship between two triangles means that three angles in one triangle are congruent to three angles in another triangle. Measure the length of each side of the two triangles. Explore triangle ABC on page 1.3 by moving points A , B , and C . Can you create a triangle that is not congruent to triangle DEF ?

- Does the AAA relationship guarantee that the two triangles are congruent? Explain why or why not.

Problem 2 – Exploring the Side-Angle-Side Relationship

The Side-Angle-Side (SAS) relationship between two triangles means that two sides and an included angle in one triangle are congruent to two sides and an included angle in the other triangle. Explore triangle CAR on page 2.2 and explore all possible triangles that can be made with vertices P , O , and D .

- Does the SAS relationship guarantee that the two triangles are congruent? Explain why or why not.

Problem 3 – Exploring the Angle-Side-Angle Relationship

The Angle-Side-Angle (ASA) relationship between two triangles means that two angles and the included side in one triangle is congruent to two angles and an included side in another triangle. Explore triangle YOU on page 3.2 and explore all possible triangles that can be made with vertices M and E .

- Does the ASA relationship guarantee that the two triangles are congruent? Explain why or why not.

Problem 4 – Exploring the Side-Side-Angle Relationship

The Side-Side-Angle (SSA) relationship between two triangles means that two sides and an angle not included in one triangle is congruent to two sides and an angle not included in another triangle. Explore triangle FIN on page 4.2 and explore all possible triangles that can be made with vertices P , A , and M .

- Does the SSA relationship guarantee that the two triangles are congruent? Explain why or why not.