In-Class Experiment

Use a ruler and protractor and work with a partner to determine which of the triplets below guarantee triangle congruence. For each triplet, try to build two noncongruent triangles with the given angle measures and side lengths.

4. ASA $m\angle A = 40°, AB = 2 \text{ in.}, m\angle B = 70°$

5. AAS $m\angle A = 40°, m\angle B = 70°, BC = 2 \text{ in.}$

6. SAS $AC = 2 \text{ in.}, m\angle A = 60°, AB = 3 \text{ in.}$

7. SSA $AC = 2 \text{ in.}, AB = 4 \text{ in.}, m\angle B = 20°$

8. SSS $AC = 2 \text{ in.}, AB = 3 \text{ in.}, BC = 4 \text{ in.}$