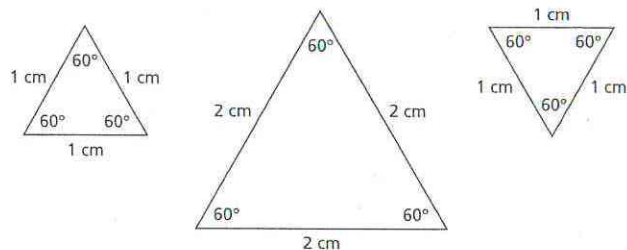


Topic 4: Congruence

for use after *Looking for Pythagoras* Investigation 4

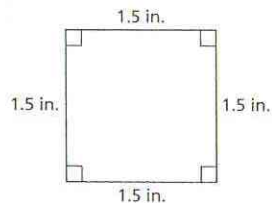
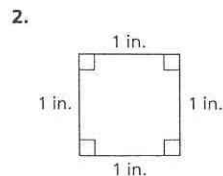
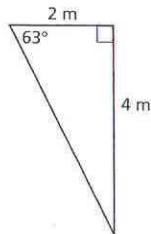
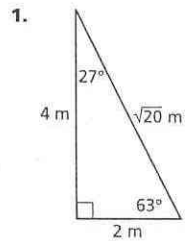
Two shapes are congruent if they are the same size and shape.



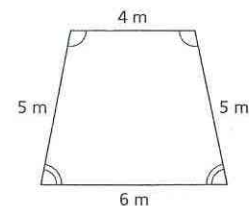
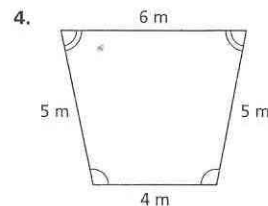
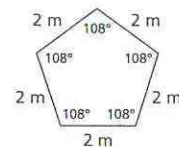
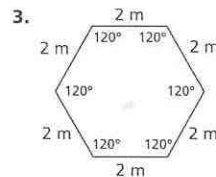
The two small triangles are congruent. The large triangle is not congruent to either of the small triangles. The large triangle is *similar* to the small triangles.

Exercises

Decide whether the shapes in each pair are congruent. Explain.



Decide whether the shapes in each pair are congruent. Explain.



Which descriptions of polygons in Exercises 5–9 guarantee that the polygons are congruent or similar. Explain.

- Quadrilateral A has four sides with the same length. Quadrilateral B has four sides with the same length.
- Quadrilateral A has four sides with the same length and four right angles. Quadrilateral B has four sides with the same length and four right angles.
- Quadrilateral A has four sides each with a length of 7 feet and two right angles. Quadrilateral B has four sides each with a length of 7 feet and two right angles.
- Triangle A is equilateral and three sides have a length of 4 meters. Triangle B is equilateral and one side has a length of 4 meters.
- Triangle A is a right triangle with legs of length 3 centimeters and 4 centimeters. Triangle B is a right triangle with a hypotenuse of 5 centimeters.