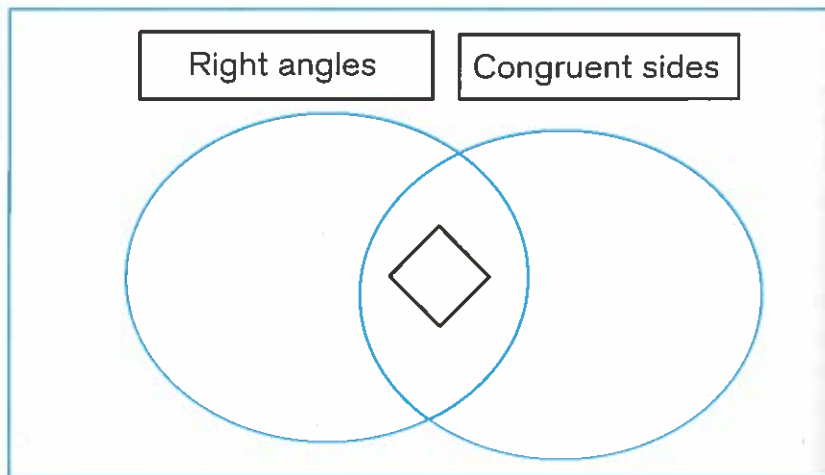


**Fig. 1.9.**  
A square properly placed in the intersection of two rings



- Why did you place that shape in the intersection? What characteristics does it have?
- What do all the shapes in one ring have in common?
- How might the shapes in a ring be different?
- What different label would eliminate one or more of the shapes from a ring?
- What different label for one of the rings would allow you to include a new shape?

**Assess**

During the activity, circulate among the groups and ask students to defend their placement of different pieces. It is especially important to hear the students' reasoning for the placement of figures in the intersection of two or three rings. Ask the students why some of the figures should remain outside all the rings. Ask, "If we drew a giant circle around everything, including the shapes that are outside the rings, what might the label for this new ring be?" (quadrilaterals)

Use the questions listed in the "Explore" section to encourage the students to talk about the relationships among the figures. Talk about the placement of the figures in some of the displays. Have the children ask questions and defend the placement. Journal reflections explaining the placement of quadrilaterals are useful for checking individuals' understanding.

This activity affords an excellent opportunity to get students thinking about the relationship between a square and a rectangle. Younger children may have thought of them as two distinct shapes, but now they should discover the relationship between them. Ask the students to list the characteristics of a square and then a rectangle. Ask, "Is a square a rectangle?" Let the students think out loud about this question. Give them time to talk in small groups. Some students may argue that the two shapes are not related, since many rectangles do not have four equal sides. Refer them to the defining characteristics of a rectangle (four right angles, with opposite sides parallel); unequal sides are not mentioned in the definition. Then explore the question Is a rectangle a square? Students may benefit from the creation of a Venn diagram to show the relationship (fig. 1.10), which is a difficult one for students to understand fully. They need to see that every square is a rectangle

**Fig. 1.10.**  
A Venn diagram showing the relationship between rectangles and squares

