

because all squares satisfy the definition of a rectangle but that many rectangles are not squares.

Extend

“Questions, please!” can be extended by giving the students some clues and having them come up with one or more figures that fit the clues. For example, ask them to draw a quadrilateral that has at least two sides equal in length and no sides parallel. Then have them make a different type of quadrilateral using the same clues. You can further extend the game to include all types of polygons.

Roping in Quadrilaterals can be extended by having students make up their own labels and then challenge a partner to use them to create quadrilateral rings. The blackline master “Mystery Rings” can be used to reverse the investigation: the students decide on appropriate labels for the rings, write them on index cards, and post them next to the correct rings. As a further extension, the students can make their own “mystery rings” for their classmates to label.

After much exploration with these activities, students can begin to look at the relationships among all types of quadrilaterals. One way is to classify quadrilaterals by the lengths of their sides:

- Having two pairs of opposite sides congruent (all parallelograms)
- Having two pairs of adjacent sides congruent (kites, squares, rhombuses)

The relationship among the rectangle, rhombus, and square should also be explored. A square is both a rectangle and a rhombus. A Venn diagram is a good visual aid to illustrate this relationship (see fig. 1.11.) Students at this age are just beginning to comprehend these classifications. They will benefit from thinking and talking about them, but they will need to continue to revisit the relationships before they solidify their understanding.

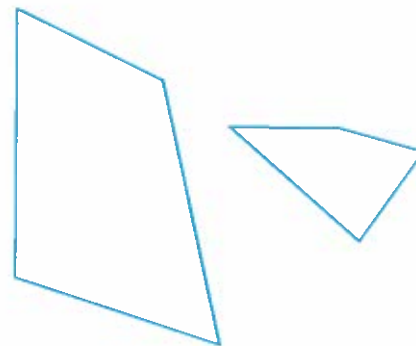
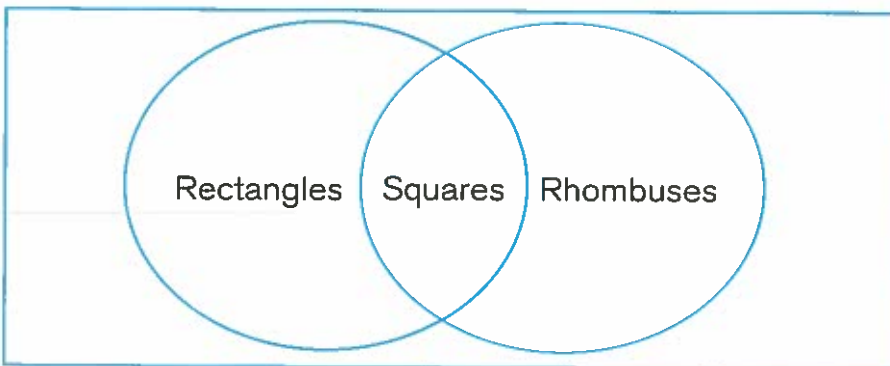


Fig. 1.11.

A Venn diagram illustrating the relationship among rectangles, rhombuses, and squares