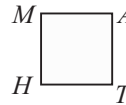**Module 9** **Characteristics of Geometric Shapes**
Lesson 2 **Quadrilaterals**

For each statement, place an X in the columns for which it is true.

	Parallelogram	Rectangle	Rhombus	Square	Trapezoid
1. Both pairs of sides are parallel.					
2. All the angles are right angles.					
3. All the sides are congruent.					
4. The figure is a quadrilateral.					

5. Name the square two different ways.

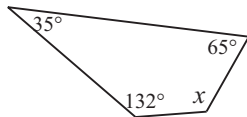**Write always, sometimes, or never.**

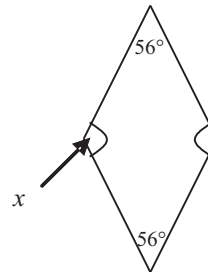**6.** A parallelogram is a rhombus.

7. A rhombus is a parallelogram.

8. A trapezoid is a quadrilateral.

Find the value of *x*.

9.

10.

11. Amanda is trying to determine the borders for a flower garden. She has two possible designs. The first has the garden in the shape of a square enclosing an area of 900 square feet. The second design has the same perimeter as the first, but it is in the shape of a trapezoid such that the parallel sides have lengths of 30 feet and 42 feet. The nonparallel sides are congruent. What are the lengths of the nonparallel sides?

Journal

1. Explain why each of the following shapes in not a quadrilateral.
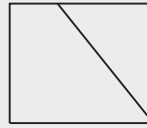   a.   b.   c.

2. Explain why all squares are rectangles but not all rectangles are squares.

3. How are a parallelogram and trapezoid alike? How are they different?

Cumulative Review

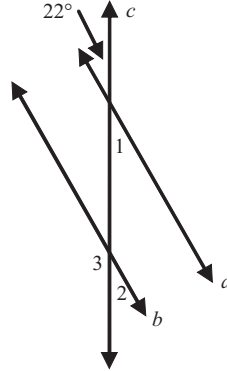**Find the measure of the complement and supplement of each angle.**

1. 105°   2. 65°   3. 2°

Module 9   Characteristics of Geometric Shapes
Lesson 2   Quadrilaterals

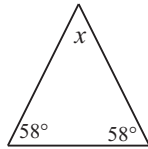**Lines *a* and *b* are parallel.**
Find the measure of each angle.

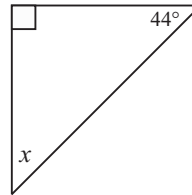**4.** $\angle 1$ **5.** $\angle 2$ **6.** $\angle 3$

Find the value of *x*.

7.

8.

9.   The sides of a triangle are 8 cm, 10 cm, and 13 cm. Is the triangle a right triangle?

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Additional Work Area

Independent Practice