

## Additional Practice 16-2

### Classify Quadrilaterals

#### Another Look!

Some quadrilaterals have special properties.



A **trapezoid** has one pair of parallel sides.



A **parallelogram** has two pairs of opposite sides parallel and equal.



A **rectangle** is a parallelogram with 4 right angles.



A **rhombus** is a parallelogram with 4 equal sides.



A **square** is a parallelogram with 4 right angles and 4 equal sides.



In **1–6**, identify each polygon. Describe each polygon by as many names as possible.

1.



Quadrilateral, trapezoid

2.



Quadrilateral, parallelogram

3.



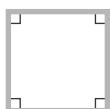
Quadrilateral, parallelogram, rectangle

4.



Quadrilateral, parallelogram, rhombus

5.



Quadrilateral, parallelogram, rectangle, rhombus, square

6.



Quadrilateral



7. A parallelogram has one side that is 4 centimeters long and one side that is 6 centimeters long. What is the perimeter of the parallelogram? Explain.

**20 cm; Sample answer: I know that parallelograms have two pairs of equal sides, so I added  $6 + 4 = 10$  and doubled that sum.**



How can you find the perimeter of a parallelogram?

8. **enVision® STEM** In 2013, a wildfire near Yosemite National Park burned about 400 square miles of forest. If one square mile equals 640 acres, about how many acres of forest were burned? Show your work.

**256,000 acres;  $400 \times 640 = 256,000$**

9. **Higher Order Thinking** Marvin says that all rhombuses are squares. Aretha says that all squares are rhombuses. Who is correct? Explain.

**Aretha is correct. Sample answer: All squares have 4 equal sides, so all squares are rhombuses. Not all rhombuses have 4 right angles, so not all rhombuses are squares.**

10. **Construct Arguments** What characteristics help you tell the difference between a rhombus and a rectangle? Explain.

**Sample answer: While both a rectangle and a rhombus are parallelograms, a rectangle has 4 right angles, but a rhombus has 4 equal sides.**

11. Bella is putting 576 cicadas into 8 different terrariums. The same number of cicadas will be put into each one. How many cicadas will be in each terrarium?

576 cicadas							
?	?	?	?	?	?	?	?

**72 cicadas**

12. A store has caps on display. Five of the caps are red. There are 4 more blue caps than green caps. There are 3 fewer yellow caps than green caps. If there are 24 caps in all, how many caps are there of each color?

**5 red caps, 10 blue caps, 6 green caps, and 3 yellow caps**



### Assessment Practice

13. Which shape could **NOT** have side lengths 9 mm, 9 mm, 9 mm, 9 mm?

- (A) trapezoid
- (B) rectangle
- (C) parallelogram
- (D) rhombus

14. Which of the following statements is **NOT** true?

- (A) A trapezoid is a rectangle.
- (B) A square is also a rectangle.
- (C) A rectangle is a quadrilateral.
- (D) A square is also a rhombus.