Unit 11 · Perimeter and Shapes Cheat Sheet

Unit 11 focus: perimeter, unknown side lengths, and comparing perimeter and area

1 Big Idea

Perimeter is the distance around a shape: add all the side lengths. Rectangles with the same perimeter can have different areas.

2 Important Vocabulary

perimeter	The distance all the way around a shape.	a 3 by 5 rectangle has a perimeter of 16 units
side length	The length of one side of a shape.	each side of the square is 4 inches
polygon	A closed shape with straight sides.	triangle, quadrilateral, pentagon, hexagon
attribute	A feature of a shape, like the number of sides.	4 right angles

3 How It Works

A rectangle has a perimeter of 18 feet and a length of 5 feet. Find the width.

Example: 5 + 5 + w + w = 18
Two lengths: 5 + 5 = 10
Two widths: 18 − 10 = 8
One width: 8 ÷ 2 = 4

Answer: 4 feet

4 Visual Model



Both have perimeter 12. Areas: 5 and 9 square units.

5 ★ Remember This · Watch Out!

★ Remember this

- Rectangle: 2 lengths + 2 widths.
- Square: 4 equal sides.

⚠ Watch out!

- **Only adding 2 sides:** add all the sides
- **Mixing up area and perimeter:** perimeter is around; area is inside

6 Try It!

1. Sides 4, 6, 5 and 7 cm. Perimeter?
   Answer: 22 centimeters
2. A square has sides of 9 m. Perimeter?
   Answer: 36 meters

Answers are printed upside down. Turn the page to check!

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More practice: quadrilaterals and splitting shapes into equal areas

1 Big Idea

Shapes in different groups can share attributes. Squares, rectangles and rhombuses are all quadrilaterals. Equal parts of a shape have equal area.

2 Important Vocabulary

quadrilateral	A polygon with 4 sides.	squares, rectangles and rhombuses are quadrilaterals
rhombus	A quadrilateral with 4 equal sides.	a diamond shape
square	A quadrilateral with 4 equal sides and 4 right angles.	a square is a rectangle and a rhombus
partition	Split a shape into parts.	split a circle into 4 equal parts

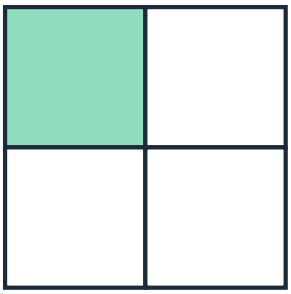
3 How It Works

Is a square a rectangle, a rhombus, or both?

Example: Check the attributes
4 right angles? yes → rectangle
4 equal sides? yes → rhombus

Answer: both

4 Visual Model



4 parts with equal area: each part is $\frac{1}{4}$ of the square.

5 ★ Remember This · Watch Out!

★ Remember this

- Quadrilateral = 4 sides.
- Equal parts: same area, not always the same shape.

⚠ Watch out!

- **A square is not a rectangle?:** it is! it has 4 right angles
- **Unequal parts:** they cannot be named $\frac{1}{4}$

6 Try It!

1. How many sides do 3 quadrilaterals have?
   Answer: 12
2. A shape is cut into 6 equal parts. Each part is?
   Answer: $\frac{9}{1}$

Answers are printed upside down. Turn the page to check!