

## GEOMETRY & REASONING

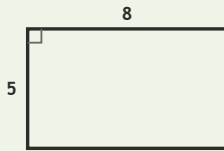
Spatial Lab • Sides, Perimeter, and Difference

Objective: Reason about shapes: perimeter, and how much longer one side is.

**DO THIS** Add the sides to find perimeter. Subtract to compare two sides.

**SHAPE FACTS** All sides are in centimetres. Add for perimeter; subtract to compare.

**EXAMPLE**



Perimeter (all sides in cm):

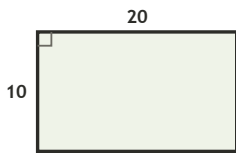
$$8 + 5 + 8 + 5 = \underline{26} \text{ cm}$$

Long side - short side:

$$8 - 5 = \underline{3} \text{ cm}$$

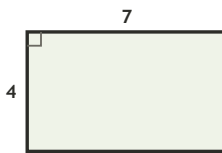
**COMPARE SIDES** How much longer is the long side, in cm?

1



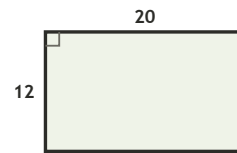
$$20 - 10 = \square \text{ cm longer}$$

2



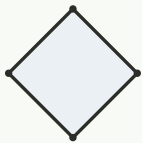
$$7 - 4 = \square \text{ cm longer}$$

3



$$20 - 12 = \square \text{ cm longer}$$

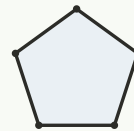
**COUNT THE SIDES** Write how many sides each shape has.



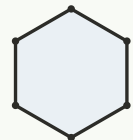
sides: \_\_\_



sides: \_\_\_



sides: \_\_\_



sides: \_\_\_

**FIND THE PERIMETER** Add all four sides, in cm.

1

Rectangle 11 by 3 cm. Perimeter?

$$11 + 3 + 11 + 3 = \square \text{ cm}$$

2

Rectangle 14 by 5 cm. Perimeter?

$$14 + 5 + 14 + 5 = \square \text{ cm}$$

3

Rectangle 9 by 8 cm. Perimeter?

$$9 + 8 + 9 + 8 = \square \text{ cm}$$

4

Rectangle 13 by 10 cm. Perimeter?

$$13 + 10 + 13 + 10 = \square \text{ cm}$$

5

Rectangle 19 by 10 cm. Perimeter?

$$19 + 10 + 19 + 10 = \square \text{ cm}$$

6

Rectangle 16 by 11 cm. Perimeter?

$$16 + 11 + 16 + 11 = \square \text{ cm}$$

I used:  addition (perimeter)  subtraction (compare)  counting (sides)

TEACHER EDITION

## GEOMETRY & REASONING

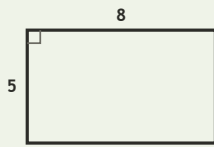
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Objective: Reason about shapes: perimeter, and how much longer one side is.

**DO THIS** Add the sides to find perimeter. Subtract to compare two sides.

**SHAPE FACTS** All sides are in centimetres. Add for perimeter; subtract to compare.

**EXAMPLE**



Perimeter (all sides in cm):

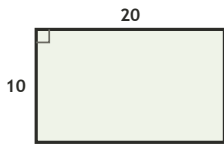
$$8 + 5 + 8 + 5 = \underline{26} \text{ cm}$$

Long side - short side:

$$8 - 5 = \underline{3} \text{ cm}$$

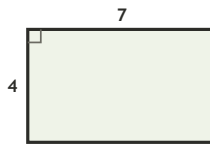
**COMPARE SIDES** How much longer is the long side, in cm?

1



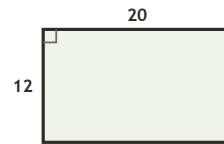
$$20 - 10 = \underline{10} \text{ cm longer}$$

2



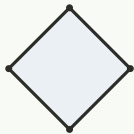
$$7 - 4 = \underline{3} \text{ cm longer}$$

3



$$20 - 12 = \underline{8} \text{ cm longer}$$

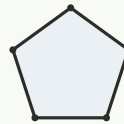
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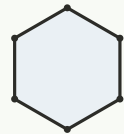
sides: 4



sides: 3



sides: 5



sides: 6

**FIND THE PERIMETER** Add all four sides, in cm.

1

Rectangle 11 by 3 cm. Perimeter?

$$11 + 3 + 11 + 3 = \underline{28} \text{ cm}$$

2

Rectangle 14 by 5 cm. Perimeter?

$$14 + 5 + 14 + 5 = \underline{38} \text{ cm}$$

3

Rectangle 9 by 8 cm. Perimeter?

$$9 + 8 + 9 + 8 = \underline{34} \text{ cm}$$

4

Rectangle 13 by 10 cm. Perimeter?

$$13 + 10 + 13 + 10 = \underline{46} \text{ cm}$$

5

Rectangle 19 by 10 cm. Perimeter?

$$19 + 10 + 19 + 10 = \underline{58} \text{ cm}$$

6

Rectangle 16 by 11 cm. Perimeter?

$$16 + 11 + 16 + 11 = \underline{54} \text{ cm}$$

**TEACHER NOTES** Answer key & guidance

Answers: perimeters and side differences  
Common error: Adding only two sides for perimeter

Strategy: Perimeter = sum of sides; compare with subtraction  
Prompt: "How many sides must you add?"

I used:  addition (perimeter)  subtraction (compare)  counting (sides)