

## GEOMETRY & REASONING

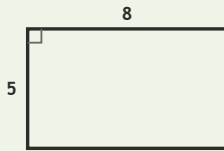
Spatial Lab • Sides, Perimeter, and Difference

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):

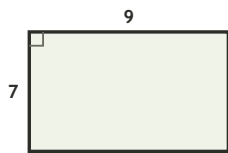
$$8 + 5 + 8 + 5 = \underline{26} \text{ cm}$$

Long side - short side:

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

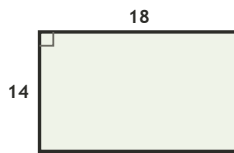
**COMPARE SIDES** How much longer is the long side, in cm?

1



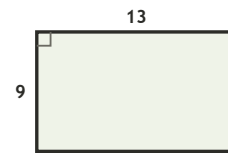
$$9 - 7 = \square \text{ cm longer}$$

2



$$18 - 14 = \square \text{ cm longer}$$

3

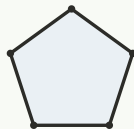


$$13 - 9 = \square \text{ cm longer}$$

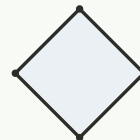
**COUNT THE SIDES** Write how many sides each shape has.



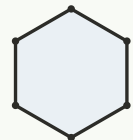
sides: \_\_\_



sides: \_\_\_



sides: \_\_\_



sides: \_\_\_

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

1

Rectangle 13 by 5 cm. Perimeter?

$$13 + 5 + 13 + 5 = \square \text{ cm}$$

2

Rectangle 11 by 5 cm. Perimeter?

$$11 + 5 + 11 + 5 = \square \text{ cm}$$

3

Rectangle 18 by 13 cm. Perimeter?

$$18 + 13 + 18 + 13 = \square \text{ cm}$$

4

Rectangle 9 by 6 cm. Perimeter?

$$9 + 6 + 9 + 6 = \square \text{ cm}$$

5

Rectangle 13 by 5 cm. Perimeter?

$$13 + 5 + 13 + 5 = \square \text{ cm}$$

6

Rectangle 13 by 8 cm. Perimeter?

$$13 + 8 + 13 + 8 = \square \text{ cm}$$

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

TEACHER EDITION

## GEOMETRY & REASONING

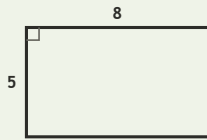
Spatial Lab • Sides, Perimeter, and Difference

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

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

EXAMPLE



Perimeter (all sides in cm):

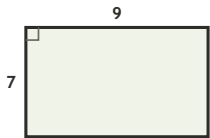
$$8 + 5 + 8 + 5 = \underline{26} \text{ cm}$$

Long side - short side:

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

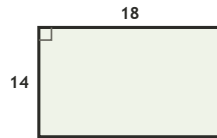
**COMPARE SIDES** How much longer is the long side, in cm?

1



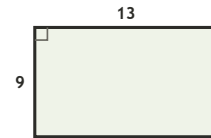
$$9 - 7 = \underline{2} \text{ cm longer}$$

2



$$18 - 14 = \underline{4} \text{ cm longer}$$

3

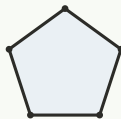


$$13 - 9 = \underline{4} \text{ cm longer}$$

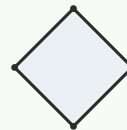
**COUNT THE SIDES** Write how many sides each shape has.



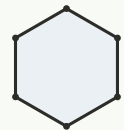
sides: 3



sides: 5



sides: 4



sides: 6

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

1

Rectangle 13 by 5 cm. Perimeter?

$$13 + 5 + 13 + 5 = \underline{36} \text{ cm}$$

2

Rectangle 11 by 5 cm. Perimeter?

$$11 + 5 + 11 + 5 = \underline{32} \text{ cm}$$

3

Rectangle 18 by 13 cm. Perimeter?

$$18 + 13 + 18 + 13 = \underline{62} \text{ cm}$$

4

Rectangle 9 by 6 cm. Perimeter?

$$9 + 6 + 9 + 6 = \underline{30} \text{ cm}$$

5

Rectangle 13 by 5 cm. Perimeter?

$$13 + 5 + 13 + 5 = \underline{36} \text{ cm}$$

6

Rectangle 13 by 8 cm. Perimeter?

$$13 + 8 + 13 + 8 = \underline{42} \text{ cm}$$

**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)