MAP SCALES

BUILDING BLOCKS

NAME _____ CLASS _____ DATE _____

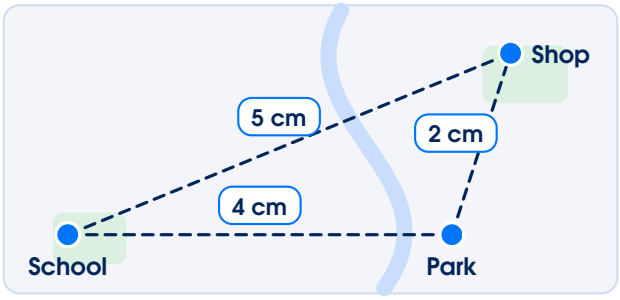
KEY IDEA

A map is a scale drawing.
The scale tells you what 1 cm on the map represents.

Do the same to both sides.

	1 cm represents **2 km**	
× 3		× 3
	3 cm represents **6 km**	

1 On this map, 1 cm represents 3 km. Find the real distances.



a) School to Park: ____ km

b) Park to Shop: ____ km

c) School to Shop: ____ km

2 Maps often have a scale bar like this one.



Each block is 1 cm long.

a) 1 cm represents ____ km

b) 5 cm represents ____ km

3 1 km = 1000 m. Do the same to both sides.

a) Change 3 km into metres.

	1 km = **1000 m**	
× 3		____
	3 km = ____ m	

b) Change 5000 m into km.

	1 km = **1000 m**	
____		____
	____ km = **5000 m**	

4 On a map, 1 cm represents 5 km. Fill in the boxes.

a) 4 cm on the map

	1 cm represents **5 km**	
× 4		____
	4 cm represents ____ km	

b) Two towns 30 km apart

	1 cm represents **5 km**	
____		____
	____ cm represents **30 km**	

MAP SCALES

SUPPORT

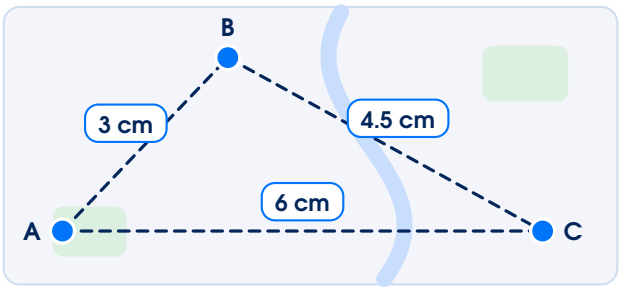
NAME _____ CLASS _____ DATE _____

KEY IDEA

A scale of 1 : 50 000 means 1 cm on the map represents 50 000 cm in real life. Both numbers use the same unit.

50 000 cm → ÷ 100 → 500 m → ÷ 1000 → 0.5 km

1 On this map, 1 cm represents 2 km. Find the real distances.



a) A to B: ☐ km

b) B to C: ☐ km

c) A to C: ☐ km

2 A map has a scale of 1 : 25 000.

a) 1 cm on the map represents ☐ cm = ☐ m

b) 4 cm on the map represents ☐ m = ☐ km

3 On a map, 1 cm represents 500 m. How long is each one on the map?

a) **A path is 3.5 km (3500 m) long.**

☐ → (☐ cm represents **3500 m**; **1 cm** represents **500 m**) → ☐

b) **A lake is 750 m wide.**

☐ → (☐ cm represents **750 m**; **1 cm** represents **500 m**) → ☐

4 Fay writes the scale "1 cm represents 5 m" as the ratio 1 : 5.

a) What mistake has Fay made? .....

b) The correct ratio is 1 : ☐

MAP SCALES

CORE

NAME _____ CLASS _____ DATE _____

KEY IDEA

In a map scale 1 : n, both parts use the same unit: 1 cm represents n cm. Convert to m or km by dividing by 100 and then 1000. Real → map: divide. Map → real: multiply.

FLUENCY

1 A map has a scale of 1 : 40 000.

a) 6 cm on the map = ☐ km

b) 8.5 cm on the map = ☐ km

c) 3 km in real life = ☐ cm

d) 600 m in real life = ☐ cm

2 Write each scale as a ratio in the form 1 : n.

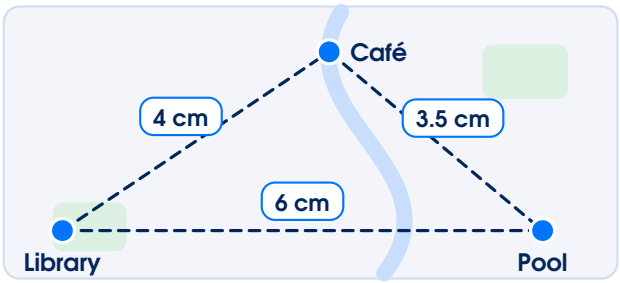
a) 1 cm represents 2 km → 1 : ☐

b) 2 cm represents 1 km → 1 : ☐

c) 4 cm represents 100 m → 1 : ☐

REASONING

3 This map has a scale of 1 : 20 000.



Kate walks Library → Café → Pool.
Leo walks straight from Library to Pool.

How much further does Kate walk?

☐ m

4 A field is 500 m long. It is shown on two maps of the same area.

a) On map P (1 : 10 000) the field is ☐ cm long.

b) On map Q (1 : 50 000) the field is ☐ cm long.

c) Which map shows more detail? Explain. .....

MAP SCALES

GREATER DEPTH

NAME _____ CLASS _____ DATE _____

REASONING

1 Is each statement true or false? Circle your answer.

Rewrite each false statement so it is true.

a) A scale of 1 : 20 000 means 1 cm represents 20 000 m. TRUE FALSE

b) If 3 cm represents 600 m, then 30 cm represents 6 km. TRUE FALSE

c) On a 1 : 50 000 map, 1 km is shown by 2 cm. TRUE FALSE

d) The larger the number n in a scale 1 : n, the more detail the map shows. TRUE FALSE

PROBLEM SOLVING

2 On map A (scale 1 : 25 000) two villages are 12 cm apart. Map B has a scale of 1 : 60 000.

How far apart are they on map B? ____

3 Ali walks this route from Start to Finish. He walks 4 km every hour.



a) Real length: ____ km

b) Time taken: ____

★ CHALLENGE FOR ALL

4 On a plan with scale 1 : 2000, a rectangular park is 15 cm long and 9 cm wide.

a) Find the real length and width of the park. ____

b) Find the real area of the park in m². ____

c) On a new plan the park is 6 cm long. What is the scale of the new plan? ____

MAP SCALES – ANSWERS

ANSWERS

BUILDING BLOCKS

1 a) 12 km · b) 6 km · c) 15 km
2 a) 2 km · b) 10 km
3 a) 3000 m · b) × 5 on both sides: 5 km
4 a) 20 km · b) × 6 on both sides: 6 cm

SUPPORT

1 a) 6 km · b) 9 km · c) 12 km
2 a) 25 000 cm = 250 m · b) 1000 m = 1 km
3 a) × 7 on both sides: 7 cm · b) × 1.5 on both sides: 1.5 cm
4 a) She mixed units – both parts must be in cm: 5 m = 500 cm · b) 500

CORE

1 a) 2.4 km · b) 3.4 km · c) 7.5 cm · d) 1.5 cm
2 a) 1 : 200 000 · b) 1 : 50 000 · c) 1 : 2500
3 Kate: 7.5 cm = 1.5 km; Leo: 6 cm = 1.2 km; Kate walks 300 m further
4 a) 5 cm · b) 1 cm · c) Map P – everything is drawn 5 times as large

GREATER DEPTH

1 a) False: 1 cm represents 20 000 cm = 200 m · b) True · c) True · d) False: a larger n shows less detail
2 12 × 25 000 cm = 3 km; 300 000 ÷ 60 000 = 5 cm
3 a) 4 + 6 + 4 = 14 cm; 14 × 50 000 cm = 700 000 cm = 7 km · b) 7 ÷ 4 = 1¾ hours (1 hour 45 minutes)
4 a) 300 m by 180 m · b) 54 000 m² · c) 1 : 5000