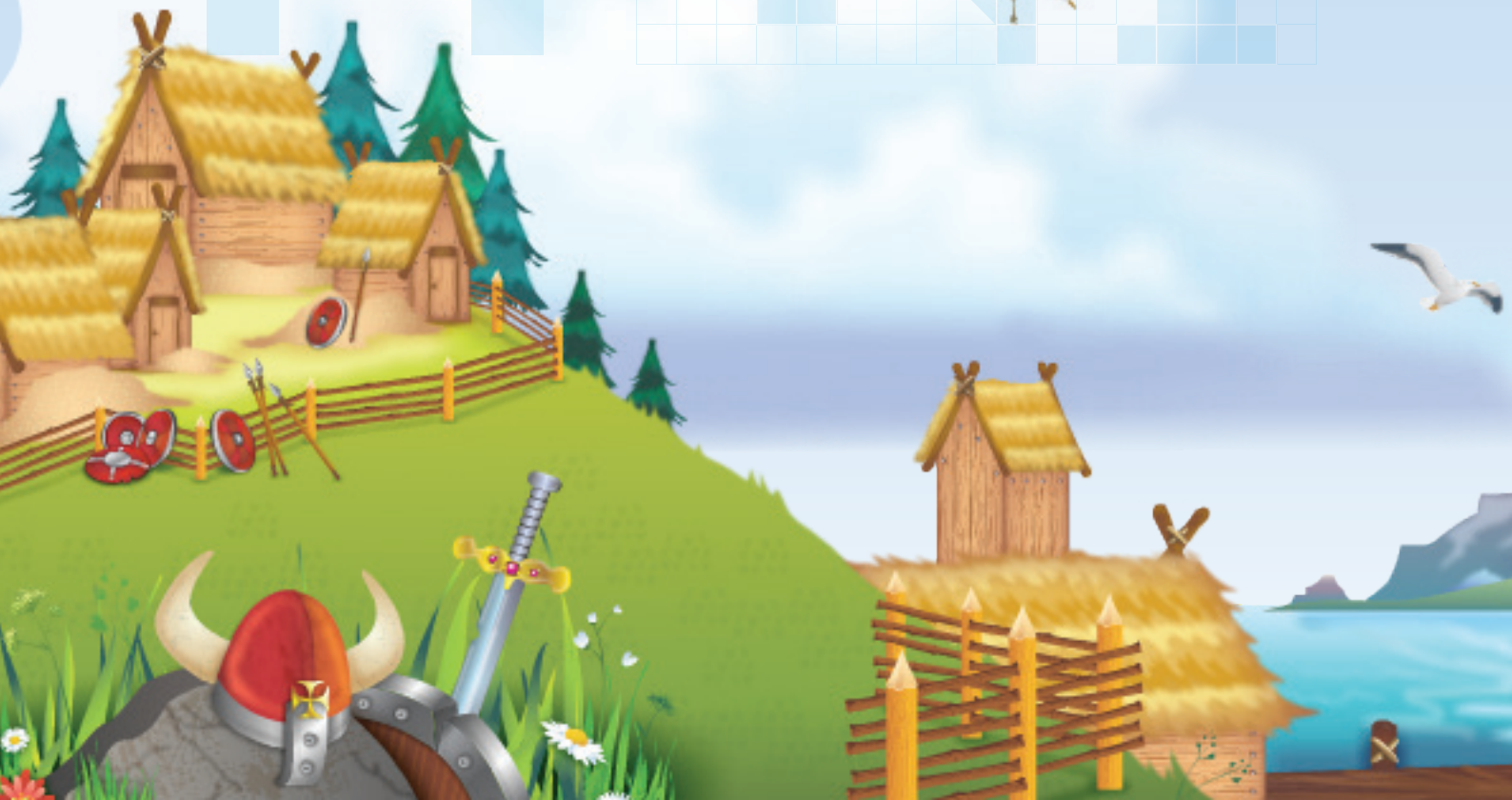
Mathletics

Series E Teacher

Length, Perimeter and Area



Series E – Length, Perimeter and Area

Contents

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Series E – Length, Perimeter and Area

Pages 1–2

1a 200

b 400

c 25

d 900

e 50

f 125

2a 0.1

b 0.3

c 0.9

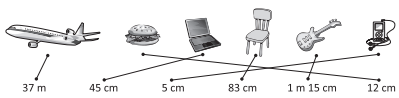
d 0.5

e 0.75

f 0.8

3a–c Answers will vary.

4



5a 10

b 12.5

c 4

6a 8.5

b 9.5

c 13

7a–c Teacher check.

8a–g Answers will vary.

Pages 3–6

1a 1.69

b 2.91

c 3.23

d 0.34

e 9.04

f 5.09

2a 4.16

b 3.19

c 5.67

d 6.07

e 5.1

f 0.04

3a 934

b 345

c 607

d 547

e 94

f 951

4a–c Teacher check.

5a, b Answers will vary.

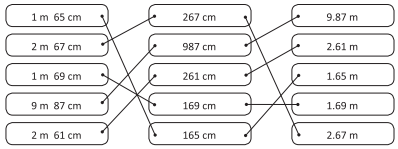
c Teacher check.

6a 0.4 m + 0.3 m + 0.3 m;
You can trace over these in green.

b 0.6 m + 0.8 m + 0.6 m

c 0.4 m + 0.3 m + 1.3 m + 1.0 m

7



8a 1.60

b 1.45

c 1.83

9 Teacher check.

a Observe students.

b Teacher check.

Pages 7–8

1a–c Answers will vary.

2a 40

b 30

c 100

d 65

e 70

f 5

3a 1; 7

b 2; 9

c 4; 2

d 3; 6

4a 1.2

b 4.6

c 6.3

d 4.8

5 9; 4

a 9; 9

b 10; 2

c 4; 5

d 6; 3

6a 7 mm; 0 cm and 7 mm; 0.7 cm

b 15 mm; 1 cm and 5 mm; 1.5 cm

c 13 mm; 1 cm and 3 mm; 1.3 cm

d 25 mm; 2 cm and 5 mm; 2.5 cm

e Redback, black widow, funnel web, brown recluse

Page 9

1a 2 km

b 6 km

c 32 km

d 87 km

e 7.5 km

f 21.25 km

g 5.34 km

h 69.73 km

2 23.22 km; 23.2 km; 22 300 km; 22.03 km; 20 300 m

3a 1074 km

b 4.66 km

Page 10

What to do

Observe students.

Pages 11–12

1a P = 6 + 1 + 6 + 1 = 14 cm

b P = 3 + 3 + 3 + 3 = 12 cm

c P = 4 + 3 + 5 = 12 cm

d P = 4 + 3 + 2 + 3 = 12 cm

2 8 + 5 + 3 + 2 + 2 = 20 cm

3a 12 cm

b 18 cm

c 12 cm

d 14 cm

Series E – Length, Perimeter and Area

Pages 11–12

3e 18 cm

f 14 cm

4a, b Answers will vary.

Pages 13–14

1a 18

b 36

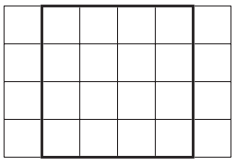
c 12

d 12

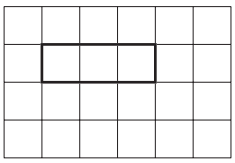
2 **B** 3 + 3 + 3 + 3 + 3 = 15 cm;
5 sides × 3 cm = 15

C 5 + 5 + 5 + 5 + 5 + 5 = 30 cm;
6 sides × 5 cm = 30 cm

3a 16

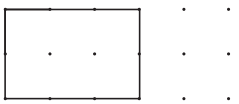


b 8

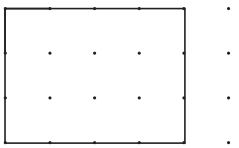


4 Answers may vary.
Sample answers

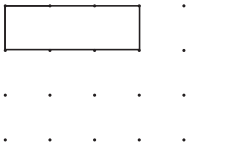
a



b

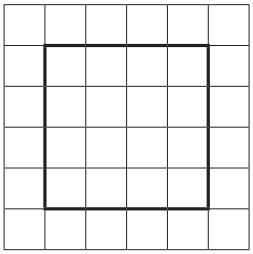


c



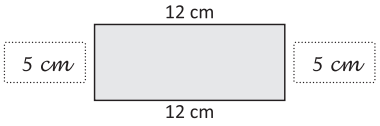
5a 16

5b

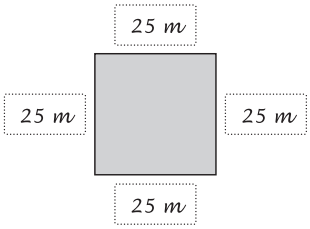


Page 15

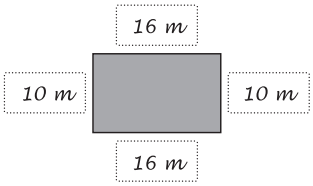
1a



b



c

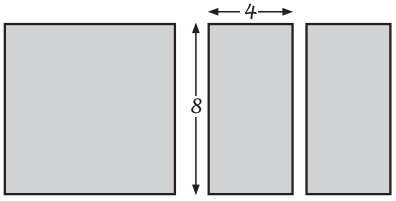


d 11 cm

Page 16

What to do

a



8 + 4 + 8 + 4 = 24;

P = 24 cm

b 10 cm

c 40 cm

Page 17

What to do

Diagram 1 64 cm

Diagram 2 54 cm

Pages 18–20

1a 3

b 5

c 9

d 11

e 16

f 6

g 10

h 12

2 Answers will vary.

3a 4

b 5

c 9

4 Answers will vary. Teacher check.

5a, b Answers will vary.

6 Answers will vary.

7a 20 cm²

b 25 cm²

c 18 cm²

Page 21

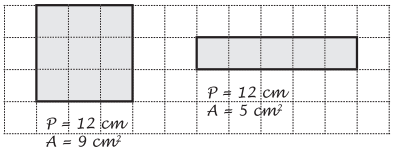
1a P = <u>20 cm</u>; A = <u>16 cm²</u>

b P = <u>16 cm</u>; A = <u>16 cm²</u>

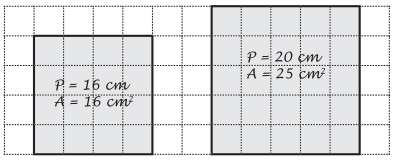
c P = <u>12 cm</u>; A = <u>6 cm²</u>

d P = <u>14 cm</u>; A = <u>9 cm²</u>

2 Answers will vary.
Sample answers:



3



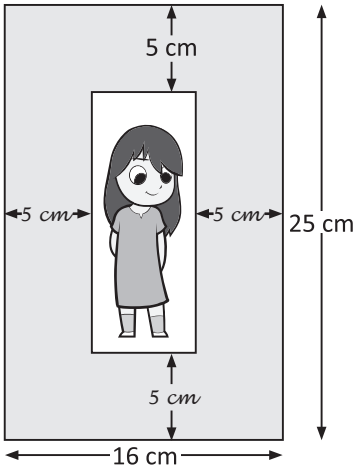
P and A are the same in the 1st square.

Series E – Length, Perimeter and Area

Page 22

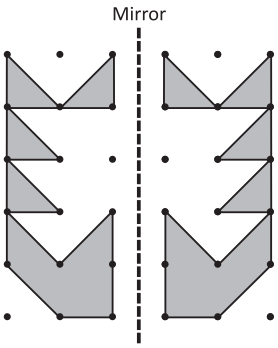
What to do

a



90

b



9

Page 23

What to do next

a 32

b 64

Units of length

Name _____

1 **Convert these metres to centimetres:**

a 5 m = ☐ cm **b** $6\frac{1}{2}$ m = ☐ cm **c** $2\frac{1}{4}$ m = ☐ cm

2 **Convert these centimetres to metres using decimals:**

a 330 cm = ☐ m **b** 50 cm = ☐ m **c** 160 cm = ☐ m

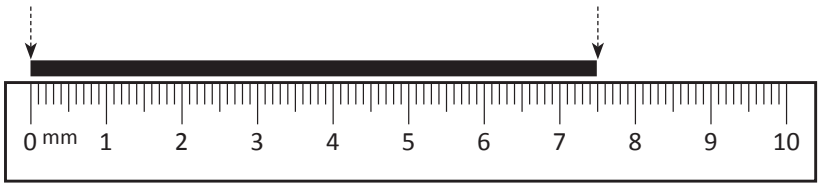
3 **Convert these measurements to and from kilometres:**

a 17 000 m = ☐ km **b** 6.13 km = ☐ m

c 18.42 km = ☐ m **d** 3570 m = ☐ km

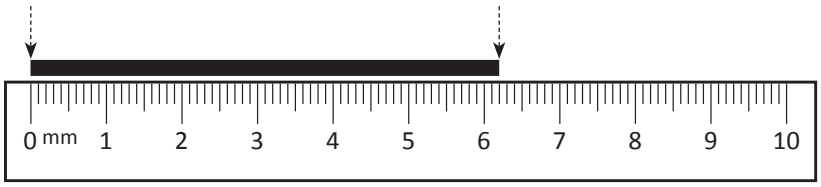
4 **Write these lengths as centimetres and millimetres:**

a



= ☐ cm ☐ mm

b



= ☐ cm ☐ mm

Skills	Not yet	Kind of	Got it
• Coverts between centimetres and metres			
• Converts between metres and centimetres			
• Converts between kilometres and metres			
• Records lengths in decimal notation			

Perimeter

Name _____

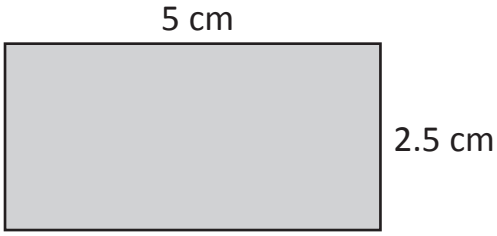
1 **What is perimeter?**

_____

_____

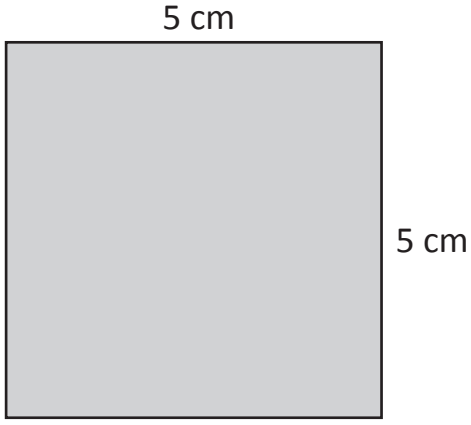
2 **Find the perimeters of the rectangle and the square:**

a



P = ☐ cm

b



P = ☐ cm

3 **On the centimetre dot paper below, use a ruler to draw the shapes.**

a Draw a rectangle with a perimeter of 16 cm.

b Draw a square with a perimeter of 12 cm.

Skills	Not yet	Kind of	Got it
• Defines the term 'perimeter'			
• Measures the perimeter of rectangles and squares			
• Draws rectangles with a defined perimeter			

Area

Name _____

1 **Would you use cm² to measure these areas? Write yes/no.**

a The area of this page. ☐

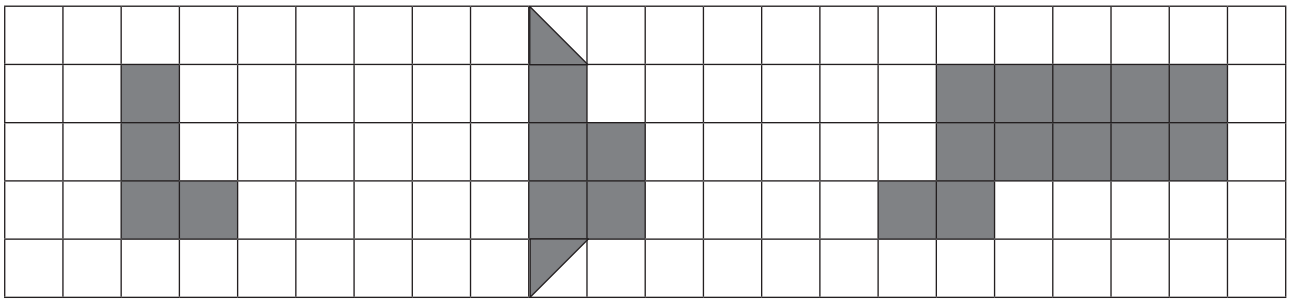
b The area of a school playground. ☐

c The area of a coin. ☐

d The area of a netball court. ☐

2 **Record the area of each shape on this 1 square centimetre grid.**

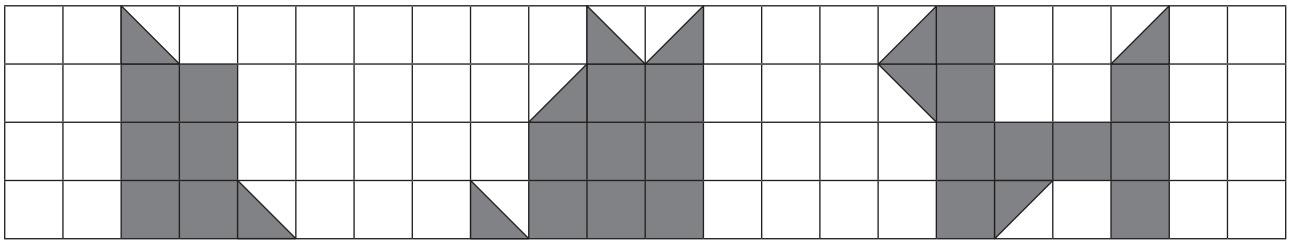
a **b** **c**



Area = _____ cm² Area = _____ cm² Area = _____ cm²

3 **Find the area of these irregular shapes. Use the 1 cm grid as your guide.**

a **b** **c**



Area = _____ cm² Area = _____ cm² Area = _____ cm²

Skills	Not yet	Kind of	Got it
• Records area using the abbreviations for square metres (m²) and square centimetres (cm²)			
• Measures the size of regular and irregular shapes using square centimetres			

Series E – Length, Perimeter and Area – Student Progress Record

Name_____ Class_____ Date _____

What went well: _____

_____

_____

_____

What I need to improve: _____

_____

_____

_____

Series E – Length, Perimeter and Area – Student Progress Record

Name_____ Class_____ Date _____

What went well: _____

_____

_____

_____

What I need to improve: _____

_____

_____

_____

Series E – Length, Perimeter and Area

ASSESSMENT ANSWERS

Page 4

1a 500

b 650

c 225

2a 3.3

b 0.5

c 1.6

3a 17

b 6130

c 18 420

d 3.57

4a 7; 5

b 6; 2

Page 5

1 Perimeter is the total length of the outside of an enclosed space.

2a 15

b 20

3a, **b** Answers will vary.

Page 6

1a yes

b no

c yes

d no

2a 4

b 6

c 12

3a 7

b 10

c 11

Series E – Length, Perimeter and Area

Topic	Reference	Strand	Objective
Units of length	4M5	Measurement	Convert between different units of measure (e.g. kilometre to metre; hour to minute).
Perimeter	4M7a	Measurement	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.
Area	4M7b	Measurement	Find the area of rectilinear shapes by counting squares.