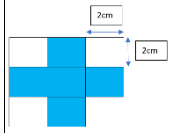
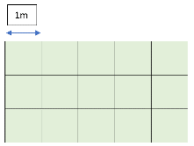
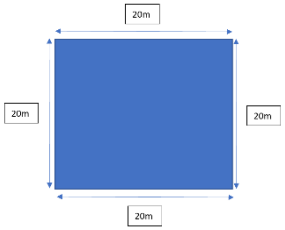
Year 3 Maths – week beginning 29.6.2020					
Theme	**Perimeter (Lesson 1 of 5) Measuring Perimeter**	**Perimeter (Lesson 2 of 5) Measuring Perimeter**	**Perimeter (Lesson 3 of 5) Measuring Perimeter**	**Perimeter (Lesson 4 of 5) Calculating Perimeter**	**Perimeter (Lesson 5 of 5) Calculating Perimeter**
Factual fluency (to aid fluency)	Identify the angles (10 questions)	Perpendicular and parallel lines (10 questions)	Add three or more one-digit numbers (10 questions)	Times tables practice (10 questions)	Times tables practice (10 questions)
Problem/ activity of the day **Remember, just like in class, you can still show the depth of your knowledge** LINK	**(Lesson 1 resources below)** **MAKING LINKS:** Last week, you learnt to describe 2D shapes, including describing and measuring the sides. Today, you will be learning to measure the total length around a shape. **THINK: (support below)** Ruby uses yarn to outline each shape. How can she find the length of yarn she needs? Our problem is on textbook page 242. Look at it now. **SEE: (model below)** Our problem and the solution is shown on page 242 of your textbook. Look at pages 244-245 of your textbook for further examples. Watch the lesson video here **DO:** Use what you have learnt today to solve: Part 1: Questions a-d on page 243 of your textbook and questions a-d on page 246 of your textbook. Check your answers before moving onto: Part 2: Worksheets 1 and 2 on pages 185-188 of your workbook.	**(Lesson 2 resources below)** **MAKING LINKS:** Yesterday, you learnt to measure the total length around a shape (the perimeter). Today, you will be continuing with this. **THINK: (support below)** Four pupils use square tiles to make a shape with a perimeter of 10cm. Who is correct? Our problem is on textbook page 247. Look at it now. **SEE: (model below)** Our problem and the solution is shown on pages 247-248 of your textbook. Watch the lesson video here **DO:** Use what you have learnt today to solve: Part 1: Questions 1 and 2 on page 249 of your textbook. Check your answers before moving onto: Part 2: Worksheet 3 on pages 189-190 of your workbook.	**(Lesson 3 resources below)** **MAKING LINKS:** Yesterday, you continued learning to measure perimeter. Today, you will measure perimeter where the scale on the grid is different. **THINK: (support below)** Sam, Lulu and Ruby use different methods to measure the perimeter of a shape. What is wrong with their methods?  Our problem is on textbook page 250. Look at it now. **SEE: (model below)** Our problem and the solution are shown on pages 250-251 of your textbook. Watch the lesson video here **DO:** Use what you have learnt today to solve: Part 1: Questions 1 and 2 on pages 252-253 of your textbook. Check your answers before moving onto: Part 2: Worksheet 4 on pages 191-192 of your workbook.	**(Lesson 4 resources below)** **MAKING LINKS:** Yesterday, you learnt to measure perimeter where the scale on the grid was different. Today, you will learn to calculate perimeter in metres. **THINK: (support below)** Large tiles are used to form a rectangle. How far is the distance around the rectangle? Compare it to the perimeter of a tile.  Our problem is on textbook page 256. Look at it now. **SEE: (model below)** Our problem and the solution are shown on page 256 of your textbook. Watch the lesson video here **DO:** Use what you have learnt today to solve: Part 1: Questions a-g on page 257 of your textbook. Check your answers before moving onto: Part 2: Worksheet 6 on pages 195-196 of your workbook.	**(Lesson 5 resources below)** **MAKING LINKS:** Yesterday, you learnt to calculate the perimeter of figures in metres. Today, you will be continuing with this. **THINK: (support below)** Find the perimeter of the square.  Our problem is on textbook page 258. Look at it now. **SEE: (model below)** Our problem and the solution are shown on pages 258-259 of your textbook. Watch the lesson video here **DO:** Use what you have learnt today to solve: Part 1: Questions 1-4 on pages 260-261 of your textbook. Check your answers before moving onto: Part 2: Worksheet 7 on pages 197-198 of your workbook.
Methods, tips, clues & checks	**Day 1 resources and answers below**	**Day 2 resources and answers below**	**Day 3 resources and answers below**	**Day 4 resources and answers below**	**Day 5 resources and answers below**

See below for resources to support you to THINK-SEE-DO

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DAY 1 RESOURCES:

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THINK:

Look at page 242 of your textbook now. Be sure to read all of the information as many times as you need to understand.

Ruby uses yarn to outline each shape. How can she find the length of yarn she needs?

Use wool, string, shoe laces or something similar around your house and a ruler to find out.

DO:

Part 1:

Complete questions a-d on page 243 of your textbook and complete questions a-d on page 246 of your textbook.

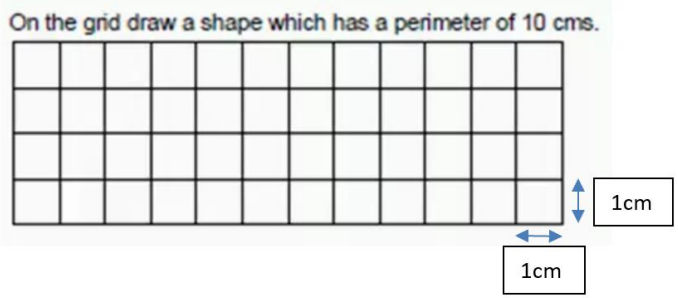
Check your answers below.

Part 2:

In your workbook, complete:
Questions 1 and 2 of worksheet 1, pages 185-186
Questions 1 and 2 of worksheet 2, pages 187-188

Deepening:

The grid is not to scale. Can you do this in more than one way?



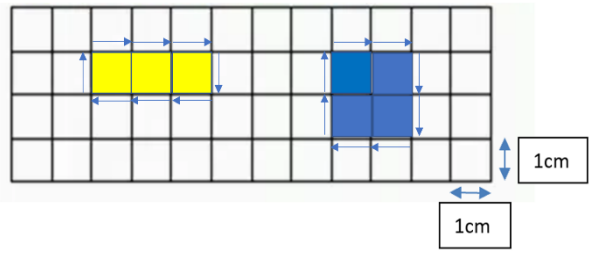
SEE:

Check the solution on page 242 of your textbook.
Look on pages 244-245 of your textbook for further examples.
Watch the lesson video here.

The images in the textbook are not to scale.
Use the measurements on the grid to help you measure the perimeter.

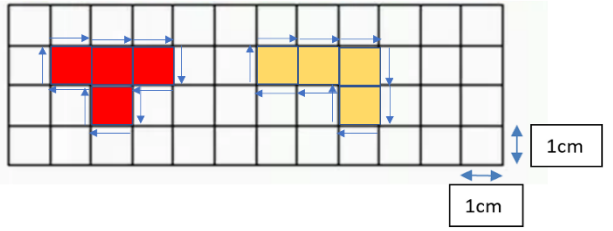
You can use string, wool or a shoe lace to outline each shape. Then you can measure the length of string you needed to outline the shape. Remember to line up the string carefully on your ruler starting at 0cm.

The total length around a figure is called the **perimeter** of the figure.



The total length around the rectangle is 8cm.
The perimeter of the rectangle is 8cm.

The total length around the square is 8cm.
The perimeter of the square is 8cm.



The perimeter of the red figure is 10cm.

The perimeter of the yellow figure is 10cm.

DAY 2 RESOURCES:

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THINK:
Look at page 247 of your textbook. Be sure to read all of the information as many times as you need to understand.

Four pupils use tiles to make a shape with a perimeter of 10cm. Who is correct?

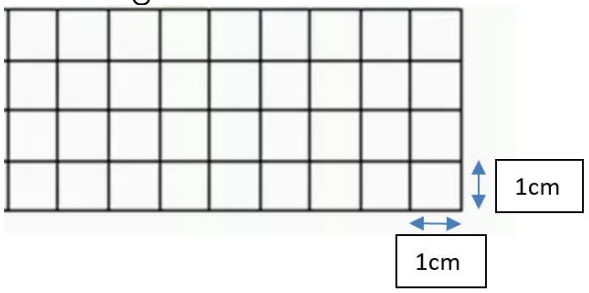
DO:
Remember to use a ruler when drawing shapes and figures.

Part 1:
Questions 1 and 2 on page 249 of your textbook.

Check your answers below.

Part 2:
Worksheet 3 on pages 189-190 of your workbook.

Deepening:
My friend used five tiles or squares to make a figure that fits into the grid.

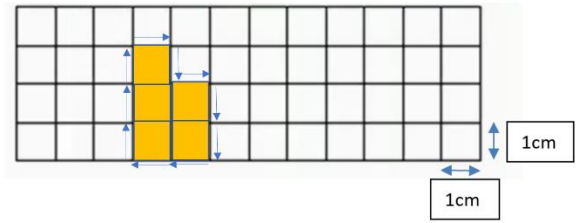


They said that every time they made a figure using all five tiles, the perimeter was the same. Is it possible to make a figure using all five tiles where the perimeter is different?

SEE:
Check the solution on page 248 of your textbook.
Watch the lesson video here.

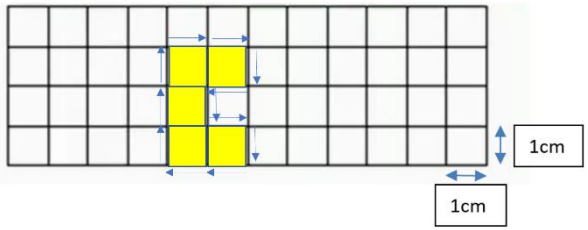
The images in the textbook are not to scale.
Use the measurements on the grid to help you measure the perimeter.

Amira:



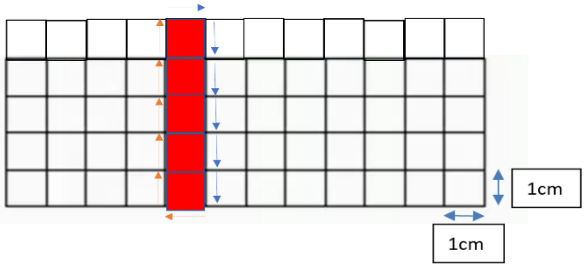
Perimeter = 10cm
Amira is correct.

Ravi:



Perimeter = 12cm
The perimeter is not 10cm.
Ravi is not correct.

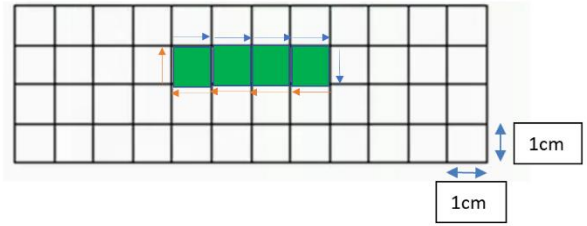
Charles:



Perimeter = 12cm
The perimeter is not 10cm.
Charles is not correct.

Another way to calculate the perimeter of Charles' rectangle is 6cm x 2 = 12cm.

Emma:



Perimeter = 10cm.
Emma is correct.

Another way to calculate the perimeter of Emma's rectangle is 5cm x 2 = 10cm.

DAY 3 RESOURCES:

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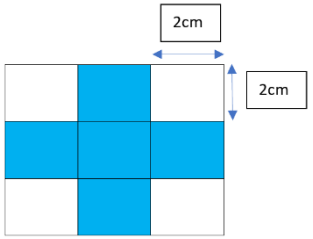
THINK:

Look at page 250 of your textbook. Be sure to read all of the information as many times as you need to understand.

Sam, Lulu and Ruby have used different methods to measure the perimeter of the shape.
What is wrong with their methods?



The images in the textbook are not to scale.
Use the measurements on the grid to help you.

DO:

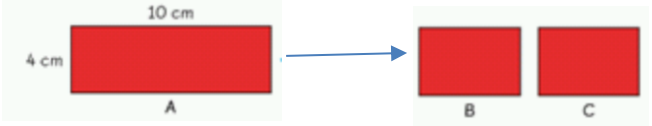
Remember to use a ruler when drawing shapes and figures.

Part 1:
Questions 1 and 2 on pages 252-253 of your textbook.

Check your answers below.

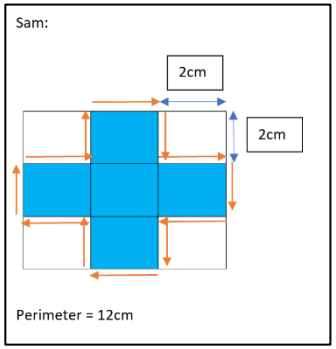
Part 2:
Worksheet 4 on pages 191-192 of your workbook.

Deepening:
Lulu cuts a rectangular piece of paper into two identical pieces.
She says that the perimeter of B and C together is the same as the perimeter of A. Do you agree? Why or why not?



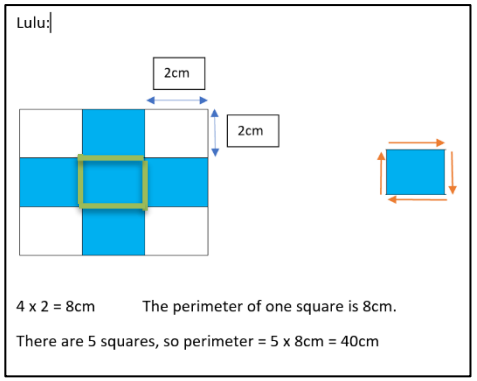
SEE:

Check the solution on page 251 of your textbook.
Watch the lesson video here.



Sam forgot that  is 2cm. He thought each square was 1cm.

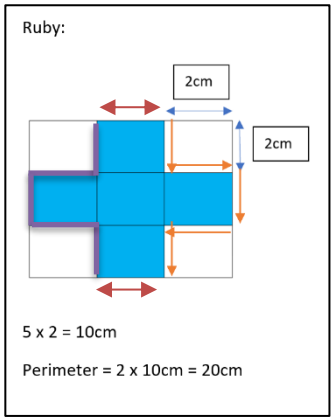
The figure has 12 sides.
Perimeter = 12 x 2cm
= 24cm



Lulu found the perimeter of one square, which is 8cm. Because there are 5 squares, she found 5 x 8cm = 40cm.

The green lines are not part of the perimeter. Lulu included these lines.

The perimeter is 12 x 2cm = 24cm.



5 x 2cm = 10cm
5 x 2cm = 10cm

2 x 10cm = 20cm but this is not yet the perimeter.
Ruby forgot about two sides of the figure.

Ruby needs to add 4cm to 20cm to get the perimeter.
The perimeter is 20cm + 4cm = 24cm.

DAY 4 RESOURCES:

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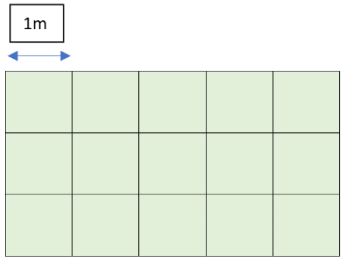
THINK:

Look at page 256 of your textbook.
Be sure to read all of the information as many times as you need to understand.



Large tiles are used to form a rectangle.
How far is the distance around the rectangle? Compare it to the perimeter of a tile.

DO:

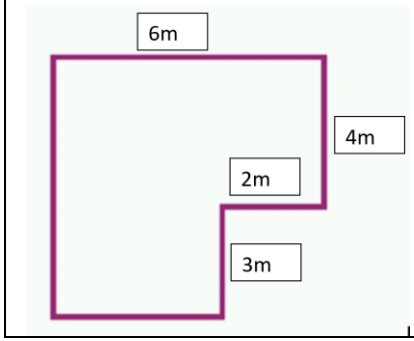
Remember to use a ruler when drawing shapes and figures.

Part 1:
Questions a-g on page 257 of your textbook.

Check your answers below.

Part 2:
Worksheet 6 on pages 195-196 of your workbook.

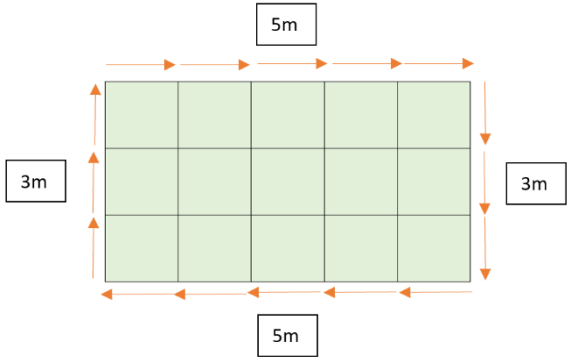
Deepening:
Is it possible to calculate the perimeter of this shape? How can you work out how long the unlabelled sides are? Explain your method.



SEE:

Check the solution on page 256 of your textbook.
Watch the lesson video here.

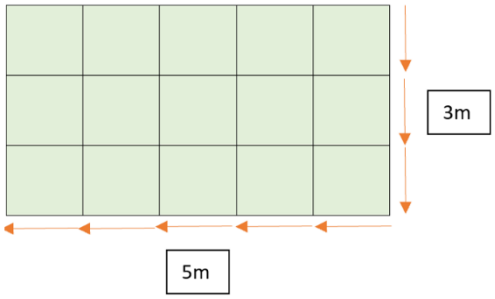
Method 1:



We could add the distance of each side together to find the total distance around the rectangle.

Perimeter = 5m + 3m + 5m + 3m
= 16m

Method 2:



We could find the distance of the length and the width of the rectangle.
Because the other sides are the same distance, we could double it (x2) to find the total distance around all four sides.

5m + 3m = 8m

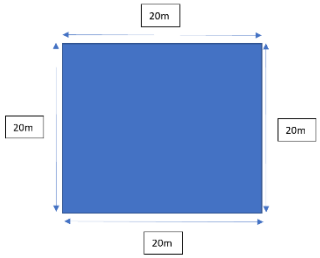
Perimeter = 2 x 8m
= 16m

DAY 5 RESOURCES:

THINK:

Look at page 258 of your textbook. Be sure to read all of the information as many times as you need to understand.

Find the perimeter of the square.



DO:

Part 1:
Questions 1-4 on pages 260-261 of your textbook.

Check your answers below.

Part 2:
Worksheet 7 on pages 197-198 of your workbook.

Deepening:
One side of a rectangle is 16 metres long.
The shorter side of the rectangle is $\frac{3}{4}$ of the length of the longer side.
How long is the shorter side?
What is the perimeter of the rectangle?
Draw a diagram to help you.

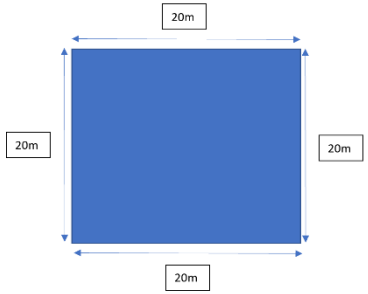
SEE:

Check the solution on pages 258-259 of your textbook.
Watch the lesson video here.

Method 1:

To find the perimeter (the length around the figure), I could add the length of each side together.

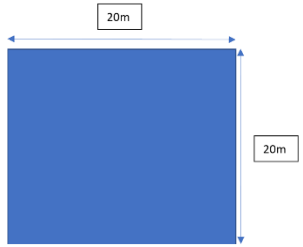
Perimeter = 20m + 20m + 20m + 20m
= 80m



Method 2:

To find the perimeter, I could calculate the length of two sides, and then multiply it by 2 because the other two sides are the same length.

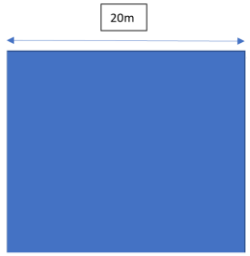
20m + 20m = 40m
Perimeter = 2 x 40m
= 80m



Method 3:

Because all four sides of a square are equal, all I need to know to find the perimeter of a square is the length of one side.
There are four sides and each side is 20m.

Perimeter = 4 x 20m
= 80m



ANSWERS – part 1:

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Day 1

Page 243:

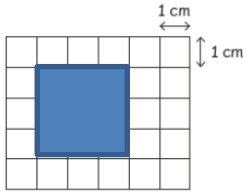
a. 4cm
b. 8cm
c. 14cm
d. 16cm

Page 246:

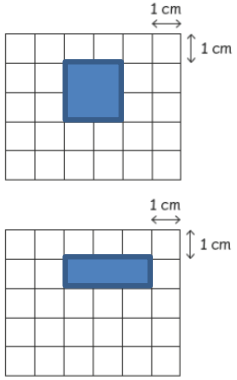
a. 16cm
b. 14cm
c. 18cm
d. 18cm

Day 2

Q1.
Answers may vary but could look like this:



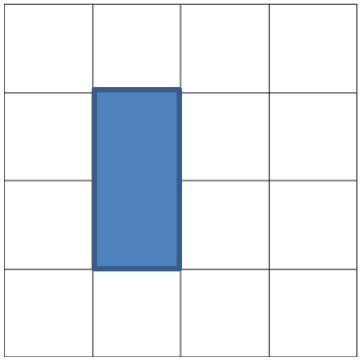
Q2.
Answers may vary but could look like this:



Day 3

Q1. a) 8cm, b) 12cm, c) 16cm, d) 28cm

Q2.
Answers may vary but could look like this:



Day 4

Q1. b) 12m, b) 22m,
c) 20m, d) 20m,
e) Figure C has the same perimeter as figure D,
f) figure A, g) figure B

Day 5

Q1.
74m
The perimeter of the field is 74m.

Q2.
36m
4 x 9 = 36m
The perimeter of the vegetable plot is 36m.

Q3.
15m + 12m + 10m + 8m = 45m
The perimeter of the flower bed is 45m.

Q4. a) 31m, b) 14m, c) 34m, d) 24m

ANSWERS – part 2 and deepening:

Day 1

Worksheet 1:

Q1. a) 16cm, b) 20cm,
c) 14cm

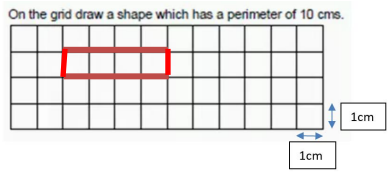
Q2. a) 14cm, b) 14cm
c) 28cm, d) equal to

Worksheet 2:

Q1. a) 18cm, b) 24cm,
c) 26cm

Q2. a) 18cm, b) 26cm,
c) 44cm, d) smaller than

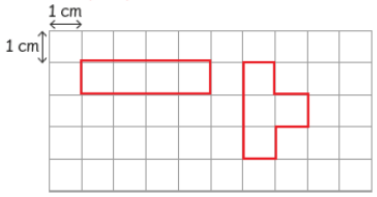
Deepening:
Answers may vary, but it could look like this:



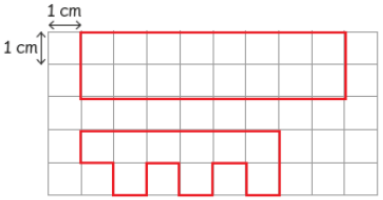
Day 2

Q1.
Figures B, C and D may vary.
The perimeter of each figure is 16cm.

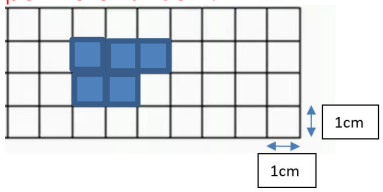
Q2.
Answers may vary but could look like this:



Q3.
Answers may vary but could look like this:



Deepening:
Yes it is possible. Here the perimeter is 10cm.



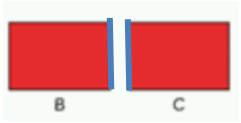
But if I put all five tiles in a row to make a rectangle, the perimeter is 12cm.

Day 3

Q1. a) 16cm, b) 24cm, c) 24cm, d) 24cm

Q2.
Answers may vary but could look like this:

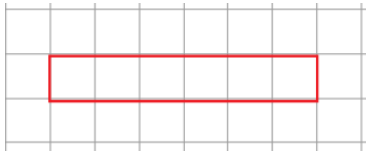
Deepening:
Lulu is incorrect. When she cut the shape into two identical pieces, she created two additional sides shown by the blue lines.



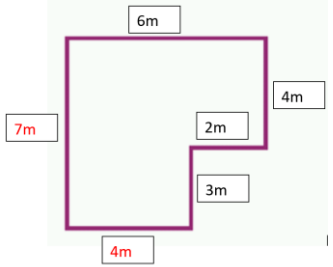
We know the width of the rectangle is 4cm, so each of these sides is 4cm.
The perimeter of the original rectangle is 28cm. The perimeter of B and C together is 36cm.

Day 4

a)14m, b) 16m, c) 16m, d) 22m,
e) figure D, f) figure A, g) 0
h) Answers may vary but could look like this:



Deepening:



I know the horizontal length of the shape is 6m. Both of the shorter horizontal sides must total 6m. One of them is 2m, so the other one must be 4m.
I know the two shorter vertical sides of the shape are 4m and 3m. If I add these together, it tells me the missing vertical side, which is 7m.
The perimeter of the shape is 26m.

Day 5

Q1. a) 18m, b) 33m, c) 36m,
d) 41m

Q2. a) 4m + 7m + 4m + 7m = 22m
The perimeter of the carpet is 22m.
b) 8m + 8m + 8m + 8m = 4 x 8m = 32m
The perimeter of the platform is 32m.
c) 12m + 20m = 32m
32 x 2 = 64m
The perimeter of the field is 64m.

Deepening:
The shorter side of the rectangle is 12m because $\frac{3}{4}$ of 16m = 12m.
The perimeter of the rectangle is 56m.

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