Year 5 maths – Summer 2 Week beginning: 8.6.20

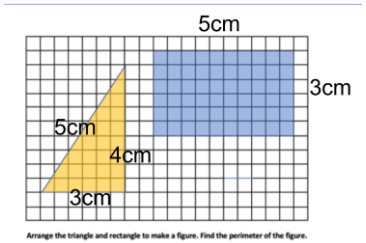
Theme	Lesson 1 of 7 Area and Perimeter Finding the Perimeter	Lesson 2 of 7 Area and Perimeter Finding the Perimeter	Lesson 3 of 7 Area and Perimeter Using Scale Diagrams to find the Perimeter	Lesson 4 of 7 Area and Perimeter Measuring the Area	Lesson 5 of 7 Area and Perimeter Measuring the Area
Factual fluency (to aid fluency)	**Practise perimeter here**	**Practise your 12 times table here**	**Find the missing side lengths here**	**Choose figures with a given area here**	**Practise area here**
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:** In year four you learnt about finding the perimeter and area of shapes using units and square units. **THINK: (support below)** Can you help me with this problem? Arrange the triangle and the rectangle to make a figure. Find the perimeter of the figure. Our problem is in the textbook on page 194. Look at it now. **SEE: (model below)** Check the solution on pages 194-195 of your textbook. Watch the video here. **DO:** Use what you have learnt today to solve: PART 1: Do questions a, b, and c on page 196 of the textbook Check your answers below before moving on to: PART 2: Now complete pages 131-132 of your workbook. Don't forget to include the unit of measurement in your answers!	**(Lesson 2 resources below)** **MAKING LINKS:** Yesterday you found the perimeter of different shapes. **THINK: (support below)** Can you help me with this problem? Amira, Ravi, Hannah and Ruby have 12 paper strips; each strip is 1m long. They think it is possible to make polygons with the same perimeter but with different shapes. Is this possible? Our problem is in the textbook on page 201. Look at it now. **SEE: (model below)** Check the solution on pages 201-203 of your textbook. Watch the video here. **DO:** PART 1: Do questions 1a, b and d from page 204 of the textbook and questions 2a, c and d on page 205 of the textbook. Check your answers below before moving on to: PART 2: Now complete question 1 of page 135 in the workbook and questions 2, 3 and 4 on page 136 of the workbook. Don't forget to include the unit of measurement in your answers!	**(Lesson 3 resources below)** **MAKING LINKS:** Yesterday you found the perimeter of different shapes. **THINK: (support below)** Can you help me with this problem? Here is a floorplan of a room. I used one side of a square to represent 1 metre. Is it possible to find the perimeter of the room? Our problem is in the textbook on page 206. Look at it now. **SEE: (model below)** Check the solution on page 207 of your textbook. Watch the video here. **DO:** PART 1: Do questions 1a and 2 on page 208 of the textbook. Check your answers below before moving on to: PART 2: Now complete question 1 on page 137 of the workbook and question 2 on page 138 of the workbook.	**(Lesson 4 resources below)** **MAKING LINKS:** Yesterday you found the perimeter of different shapes. **THINK: (support below)** Can you help me with this problem? How many ▭ are needed to create the next square? Our problem is in the textbook on page 212. Look at it now. **SEE: (model below)** Check the solution on pages 213-214 of your textbook. **DO:** PART 1: Do questions 1 and 2 on page 215 of the textbook. Check your answers below before moving on to: PART 2: Now complete question 1 or page 141 of the workbook and question 2 on page 142 of the workbook.	**(Lesson 5 resources below)** **MAKING LINKS** Yesterday you found the area of different shapes. **THINK: (support below)** Can you help me with this problem? Think of different ways to find the area of this figure. Our problem is in the textbook on page 216. Look at it now. **SEE: (model below)** Check the solution on pages 216-218 of your textbook. **DO:** PART 1: Do questions 1-4 on page 219 of the textbook Check your answers below before moving on to: PART 2: Now complete question 1 on page 143 of the workbook and question 2 from page 144 of the 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

Quality First Education Trust

DAY 1 RESOURCES:

THINK:



Look at **page 194 in your textbook**. Be sure to read the information as many times as you need to be able to understand how to solve the problem.

DO: PART 1: Do questions a, b, and c on page 196 of the textbook

Check your answers below.

PART 2: Now complete pages 131-132 of your workbook.

Deepening:
Can you find the perimeter of these shapes?

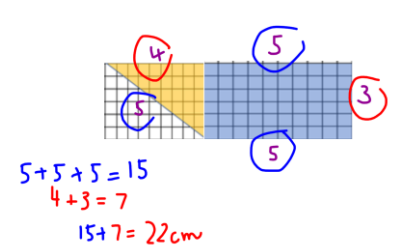
Now check your answers with a coloured pen or pencil with the answer sheet below.

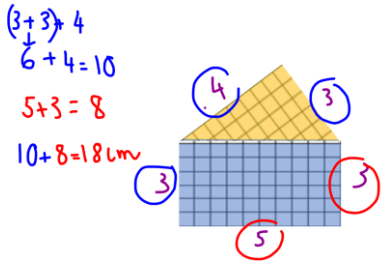
SEE: Check the solution on pages 194-195 of your textbook.
Watch the video here.

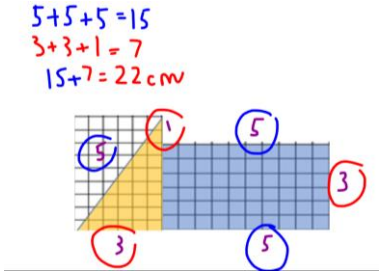
Here are some different ways you could solve this.

When adding up all the sides to find the perimeter, I have grouped the numbers to make them easier to add.

You could group all of the same number e.g. 5+5+5 = 15 or find combinations that make 10 e.g. 6+4 = 10







DAY 2 RESOURCES:

THINK: Look at **page 201 in your textbook**. Be sure to read the information as many times as you need to be able to understand how to solve the problem.

Amira, Ravi, Hannah and Ruby have 12 paper strips; each strip is 1m long.

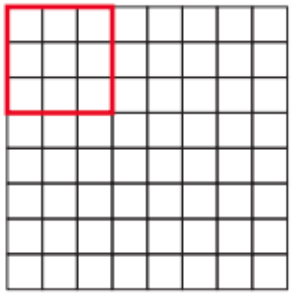
They think it is possible to make polygons with the same perimeter but with different shapes. Is this possible?

DO: PART 1: Do questions 1a, b and d from page 204 of the textbook and questions 2a, c and d on page 205 of the textbook.

Check your answers below.
PART 2: Now complete question 1 of page 135 in the workbook and questions 2, 3 and 4 on page 136 of the workbook.

Deepening:

Here is a picture of a square drawn on cm² paper.



Draw another rectangle with the same perimeter as this square.

Do the two rectangles have the same area?

Is this always, sometimes or never true of other pairs of rectangles with the same perimeter?

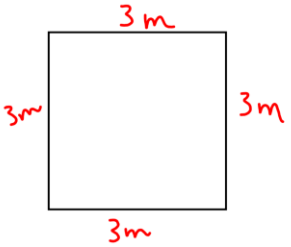
Explain your reasoning.

Now check your answers with a coloured pen or pencil with the answer sheet below.

SEE: Check the solution on pages 201-203 of your textbook.

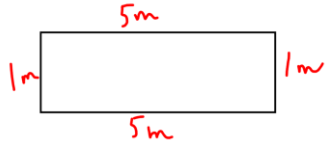
Watch the video here.

They could have made a variety of polygons with a perimeter of 12m.



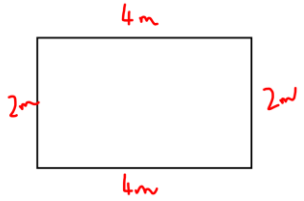
3 x 4 = 12m
or
3+3+3+3=12m

Square



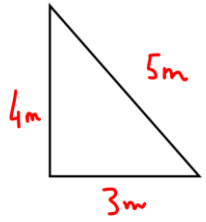
5+5+1+1=12m

Rectangle



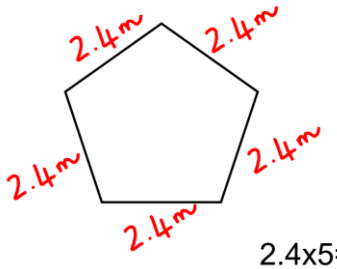
4+4+2+2=12m

A different rectangle



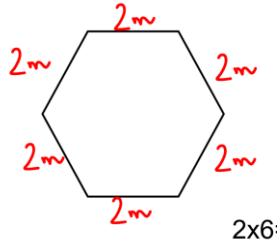
5+4+3=12m

Triangle



2.4x5=12m

Pentagon

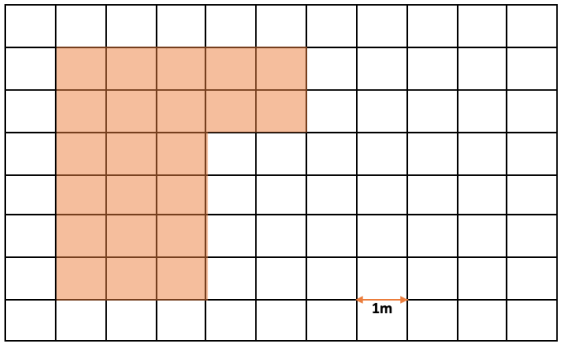


2x6=12m

Hexagon

DAY 3 RESOURCES:

THINK: Look at **page 206 in your textbook**. Be sure to read the information as many times as you need to be able to understand how to solve the problem.



Here is a floorplan of a room.

I used one side of a square to represent 1 metre.

Is it possible to find the perimeter of the room?

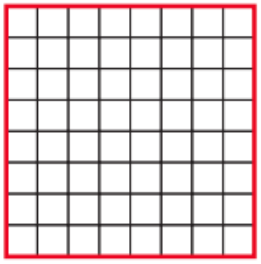
DO:

PART 1: Do question 1**a** and 2 on page 208 of the textbook.
Check your answers below.

PART 2: Now complete question 1 on page 137 of the workbook and question 2 on page 138 of the workbook.

Deepening:

Here is a picture of a square drawn on cm² paper.



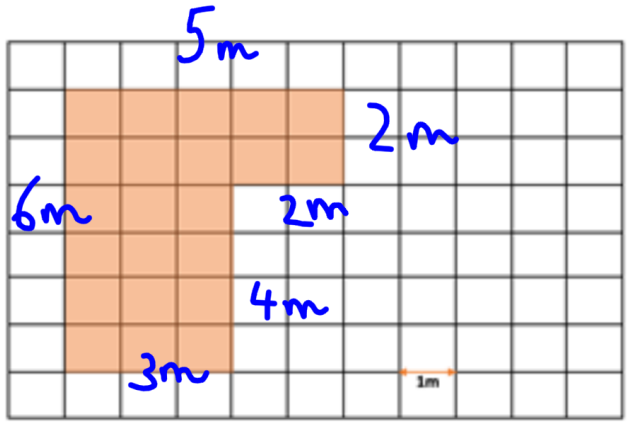
How many other rectangles are there with the same perimeter as the square, where the sides are a whole number of cm?

Show your workings.

SEE: Check the solution on page 207 of your textbook.

Watch the video here.

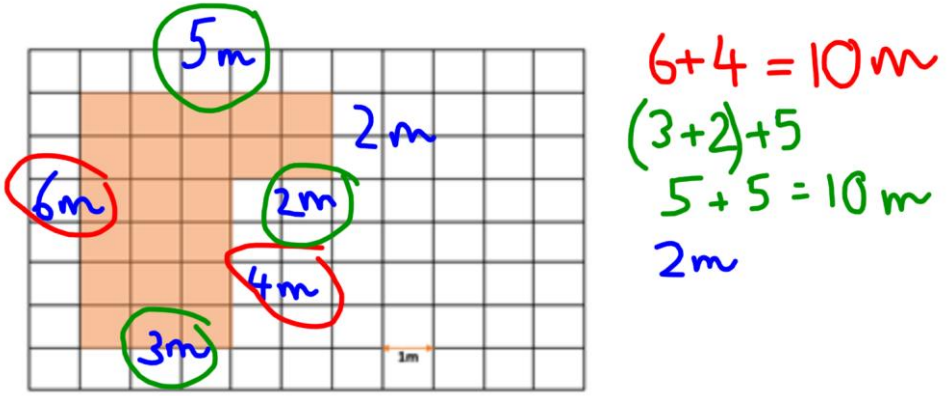
First, **count the squares** to label all the sides.
Do not measure with a ruler.



Then add the sides up by grouping the numbers.

Making 10 is often a useful thing to do.

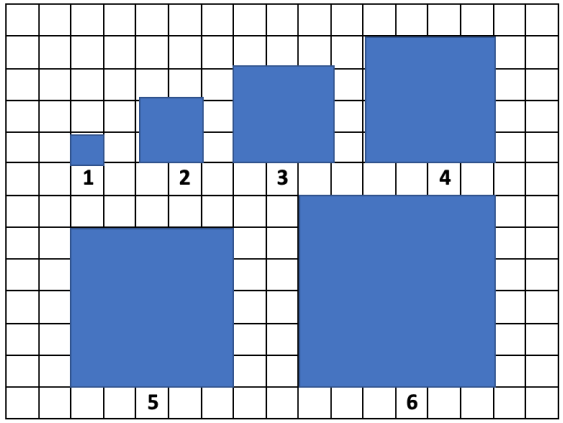
10+10+2 = 22m, so the perimeter of the room is 22m



DAY 4 RESOURCES:

THINK: Look at **page 212 in your textbook**.

Be sure to read the information as many times as you need to be able to understand how to solve the problem.



DO:

PART 1: Do questions 1 and 2 on page 215 of the textbook.

Check your answers below.

PART 2: Now complete question 1 or page 141 of the workbook and question 2 on page 142 of the workbook.

Deepening:

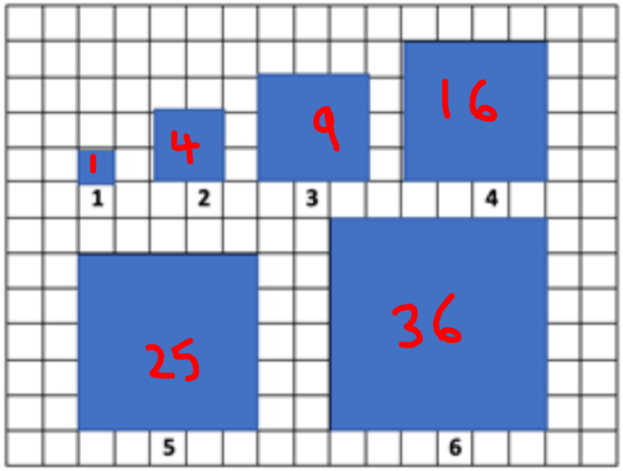
Complete the Mind Workout on page 151 of the **workbook**.

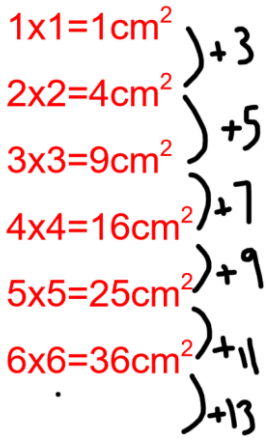
SEE: Check the solution on pages 213-214 of your textbook.

When I count the squares, I notice a pattern.

If I multiply the length of one side by itself e.g. 2 x 2 = 4, I get the total number of small squares.

The last square was made up of 36 little squares (6x6=36) so following this pattern the next square will be 7x7 = 49, so it will be made of **49 little squares or have an area of 49cm²** if each small square represents 1cm².



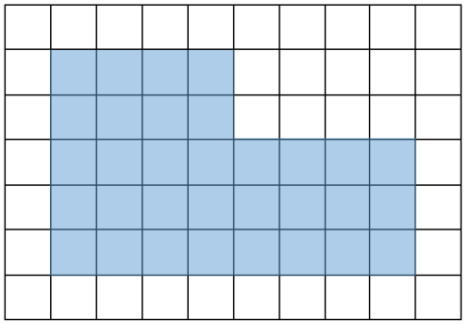


You can also look at the relationship between each square and the next by checking how much bigger the next square is. You can see this in black above.

Following the pattern, I would calculate 36+13 to find how many squares are needed, which again gives me 49 squares or 49cm².

DAY 5 RESOURCES:

THINK: Look at **page 216 in your textbook**.



Think of different ways to find the area of this figure.

Each square represents1cm².

DO:

PART 1: Do questions 1-4 on page 219 of the textbook

Check your answers below.

PART 2: Now complete question 1 on page 143 of the workbook and question 2 from page 144 of the workbook.

Deepening:

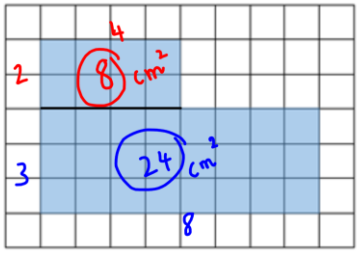
Complete question 3 and 4 of Review 12 on page 153 of the workbook.

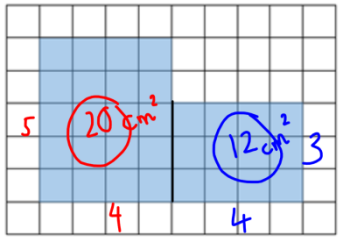
SEE: Check the solution on pages 216-218 of your textbook.

You can break up this shape in different ways.

You can count each square or you can multiply the length by the height e.g. 4 x 2 = 8.
If I add the total number of squares together (8 + 24), I get **32 squares or 32cm².**

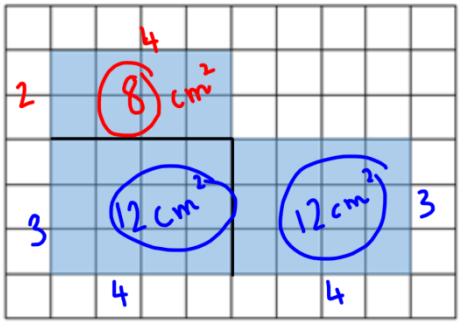
You could also split it into two rectangles with areas 20cm² and 12cm² which gives the same total of **32 squares or 32cm².**

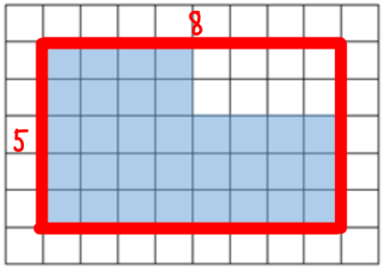




Another way is to make three rectangles.

Alternatively you could work out the area in red 5x8 = 40cm² then subtract the white bit which is





ANSWERS – Part 1 and 2:

Day 1

Textbook:

a) 18cm
b) 12cm
c) 24cm

Workbook:

1a) 12cm
b)12cm
c) 18cm
2a) 20cm
b) 24cm
c) 24cm

Deepening:

All the shapes have the same perimeter apart from the shape in the centre. There is not enough information to find the perimeter of the centre shape. However, it can be estimated at 100cm.

Day 2

Textbook:

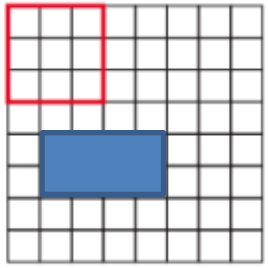
1a) 30m
b) 34cm
c) 40cm
d) 58cm
2a) 4.8m
b) 3.6m
c)6m
d)9.6m
e) 7.2m

Workbook:

1a) 16m
b) 24m
c) 38m
d) 51m
2a) 30m
b) 50m
3. 24m
4. 84m

Deepening:

The rectangles have the same perimeter of 12 units but they have different areas (9 units^2 and 8 units^2) This is true for other rectangles too. Share your thinking of other rectangles with the same perimeter and different areas with your teacher.



Day 3

Textbook:

1a) 22m

2a) 7m
b) 8m
c) 11m

Workbook:

1a)22m
b)22m
c) 20m
d) A

2a) 34m
b) 22m
c) 24m
d) 84m

Deepening:

9 different rectangles with perimeter 32 units.

1,1, 15,15
2,2,14,14
3,3,13,13
4,4,12,12
5,5,11,11
6,6,10,10
7,7,9,9
8,8,8,8

Day 4

Textbook:

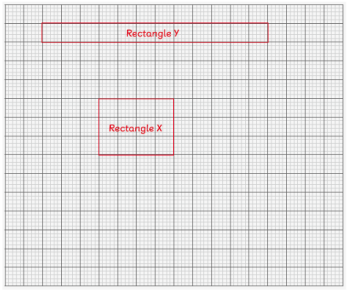
1a) 64cm^2
b) 81cm^2
2. 100 cm^2

Workbook:

1a) 9cm^2
b) 25cm^2
c) 49cm^2

2a) 36cm^2
b)100cm^2

Deepening:



a) 14cm
b) 26cm

Day 5

Textbook:

1. 16cm^2
2. 22cm^2
3. 54cm^2
4. 26cm^2

Workbook:

1a) 18cm^2
b) 22cm^2
c) 34cm^2

2a) 40cm^2
b)38cm^2
c)53cm^2

Deepening:

3a) 9cm^2
b)22cm^2
c)41cm^2

4.
4 units

4x4= area 16 units^2

4+4+4+4= perimeter = 16 units