

# Home Learning **MATHS** week 12

Monday - Week 9 lesson 1

Tuesday - Week 9 lesson 2

Wednesday - Week 9 lesson 3

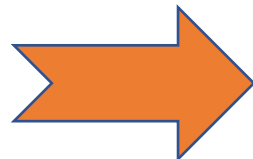
Thursday - Week 9 lesson 4

Friday - Catch up day

Summer Term - Week 9 (w/c 22nd June)	+
Summer Term - Week 8 (w/c 15th June)	+
Summer Term - Week 7 (w/c 8th June)	+

This is where this weeks videos will be

You will need to use this link to access the videos



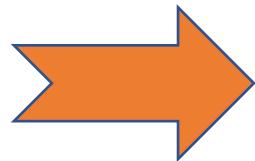
<https://whiterosemaths.com/homelearning/year-6/>

Home Learning **MATHS** week 12

This week, you will not be able to access the worksheets online.

I have included them as a PDF file and are accessible through the school website.

You will need to use this link to access the videos



<https://whiterosemaths.com/homelearning/year-6/>

# Answers - Monday

## Area and perimeter

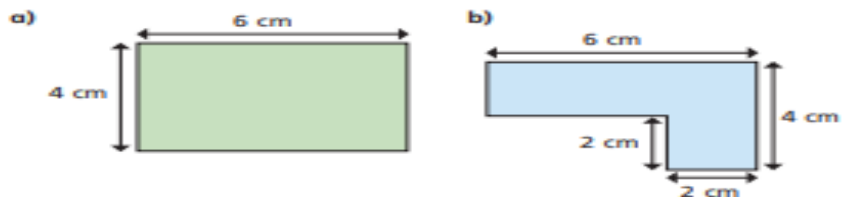
1 Use the words to complete the sentences.

perimeter     $\text{cm}^2$     cm    m  
 area     $\text{m}^2$     inside    around

Area is the amount of space inside a two-dimensional shape. It can be measured in units such as  $\text{cm}^2$  or  $\text{m}^2$ .

Perimeter is the distance around a two-dimensional shape. It can be measured in units such as cm or m.

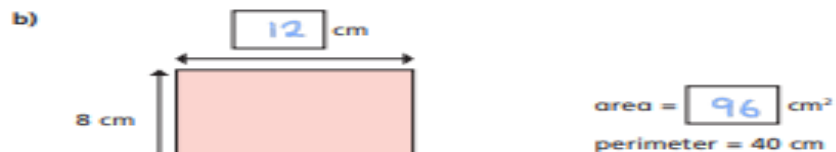
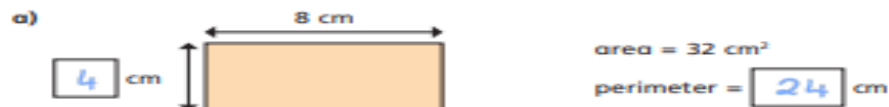
2 Work out the areas and perimeters of the shapes.



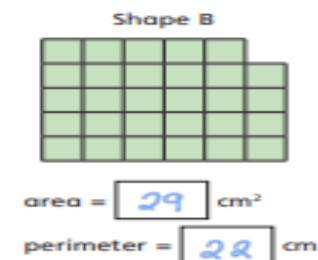
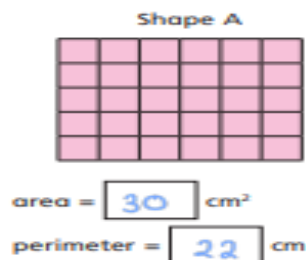
perimeter =  cm  
 area =   $\text{cm}^2$

perimeter =  cm  
 area =   $\text{cm}^2$

3 Work out the missing values.



4 Work out the areas and perimeters of the shapes.



What do you notice?



5



Tommy

If you start with a rectilinear shape, when you increase the area, the perimeter will increase.



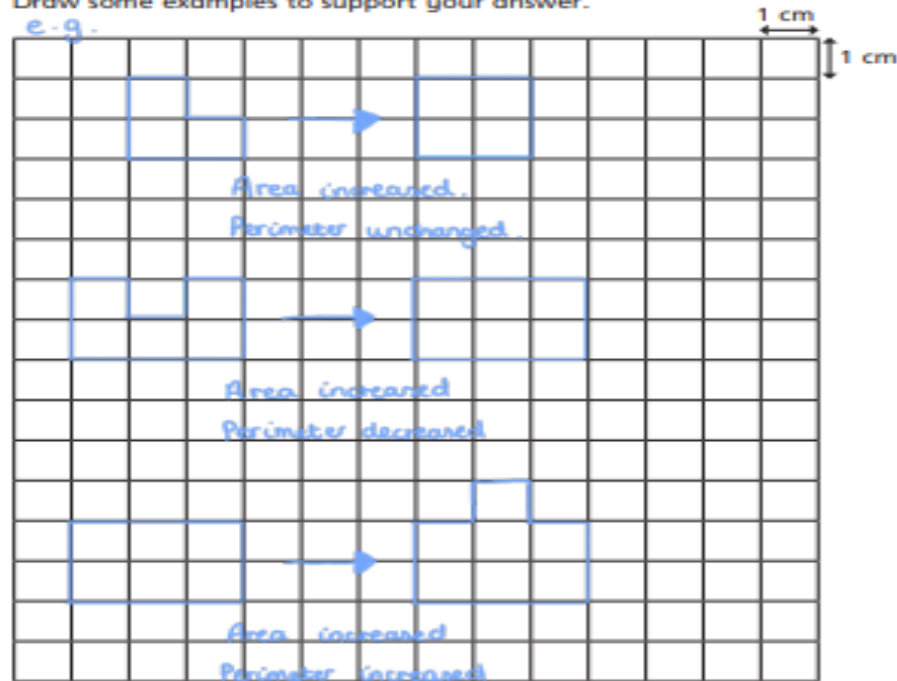
Amir

It depends on the shape.

Who do you agree with? Amir

Draw some examples to support your answer.

e.g.



6

Two rectilinear shapes, A and B, each have an area of 12 squares.

- Shape A has the largest perimeter possible.
- Shape B has the smallest perimeter possible.

Draw shapes A and B.



What do you notice?

7

Mr Jones has 50 m of fencing.

He wants to make a rectilinear enclosure using all the fencing.

- a) Draw an example of a shape he could make. Give units on your diagram.



- b) What is the greatest possible area of the enclosure?  $156\text{m}^2$

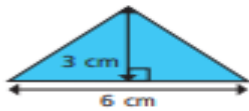
- c) What is the smallest possible area of the enclosure?  $24\text{m}^2$



# Tuesday

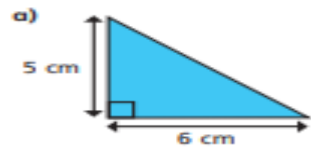
## Area of a triangle (3)

- 1 Calculate the area of the triangle.

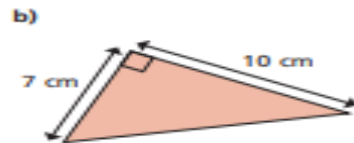


area =  cm<sup>2</sup>

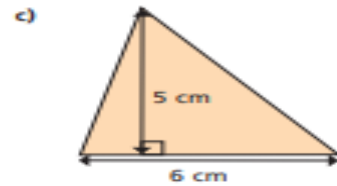
- 2 Calculate the area of the triangles.



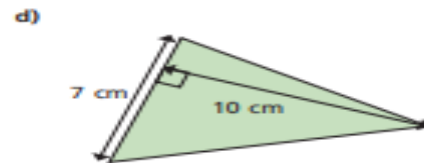
area =  cm<sup>2</sup>



area =  cm<sup>2</sup>

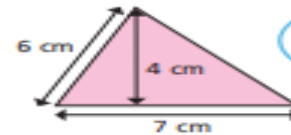


area =  cm<sup>2</sup>



area =  cm<sup>2</sup>

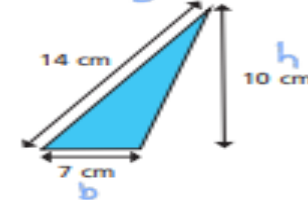
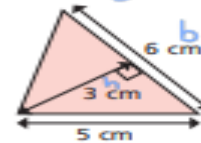
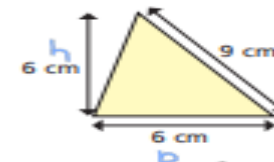
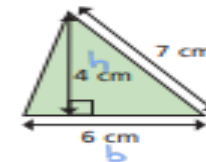
- 3 What mistake has Dora made?



To find the area you do  $7 \times 6 \div 2 = 21 \text{ cm}^2$



- 4 Label the base of each triangle  $b$ .  
Label the perpendicular height  $h$ .



- 5 Are the statements always, sometimes or never true?

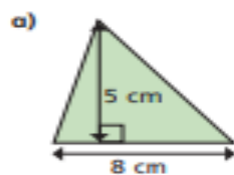
The side at the bottom of a triangle is the base.

Sometimes

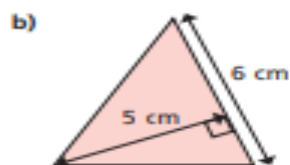
The perpendicular height is equal to the vertical height.

Sometimes

6 Calculate the area of the triangles.



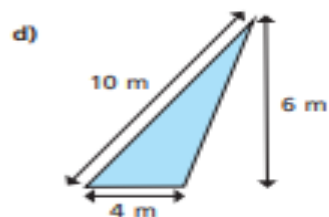
area =   $\text{cm}^2$



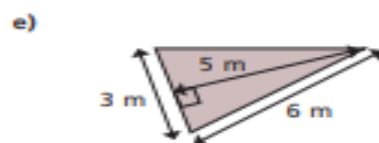
area =   $\text{cm}^2$



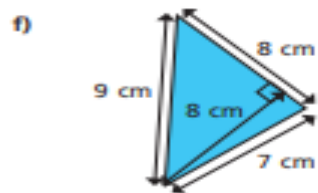
area =   $\text{mm}^2$



area =   $\text{m}^2$

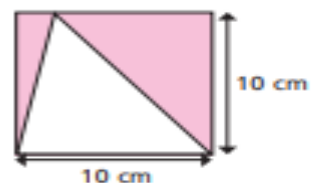


area =   $\text{m}^2$



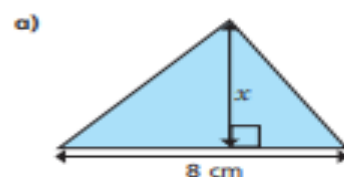
area =   $\text{cm}^2$

7 Find the area of the shaded region.

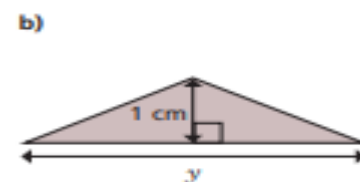


area =   $\text{cm}^2$

8 The area of each triangle is  $12 \text{ cm}^2$ . Find the missing lengths.

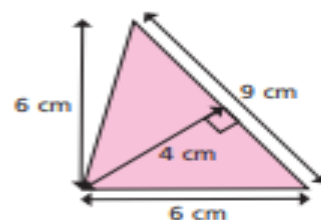


$x =$    $\text{cm}$



$y =$    $\text{cm}$

9 Show two ways you can work out the area of the triangle.



$$\frac{9 \times 4}{2} = 18 \text{ cm}^2$$
$$\frac{6 \times 6}{2} = 18 \text{ cm}^2$$

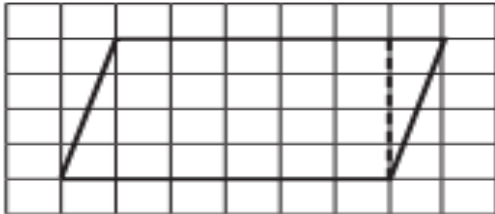
Compare answers with a partner.

# Wednesday

## Area of a parallelogram

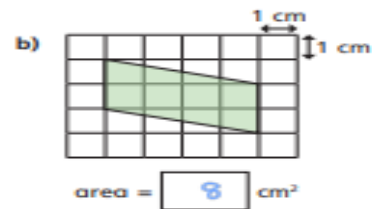
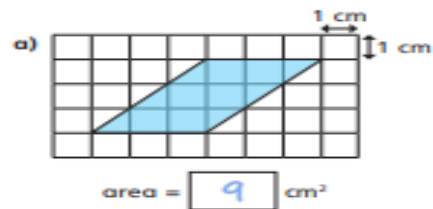


- 1 On a piece of squared paper, copy this parallelogram and cut it out.

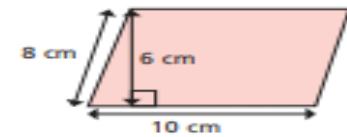


- a) Create a rectangle by cutting off the right-angled triangle and moving it.
- b) Complete the sentences.  
The area of the rectangle is  squares.  
The area of the parallelogram is  squares.

- 2 Calculate the areas of the parallelograms.



- 3 Huan is finding the area of the parallelogram.



$$10 \times 8 = 80 \text{ cm}^2$$

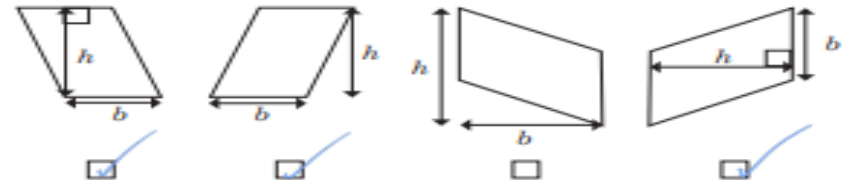
- a) What mistake has Huan made?

He hasn't used the perpendicular height.

- b) What is the correct answer?

$$\text{area} = \boxed{60} \text{ cm}^2$$

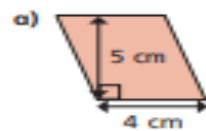
- 4 Esther has labelled the bases and heights for four parallelograms. Three are correct; one is incorrect. Tick the shapes that have been correctly labelled.



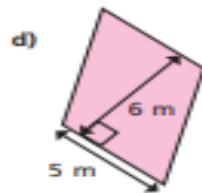
Explain to a partner why one is incorrect.



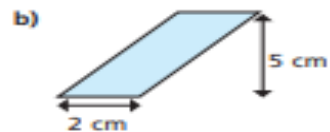
5 Calculate the areas of the parallelograms.



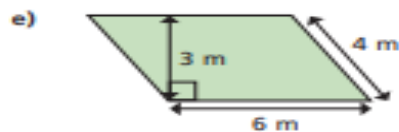
area =   $\text{cm}^2$



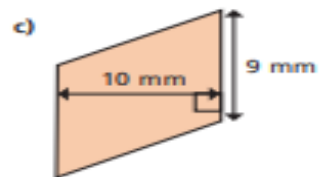
area =   $\text{m}^2$



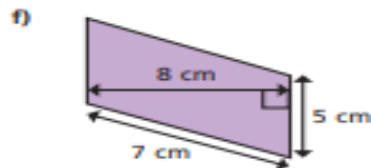
area =   $\text{cm}^2$



area =   $\text{m}^2$

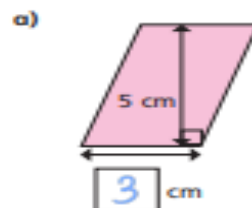


area =   $\text{mm}^2$

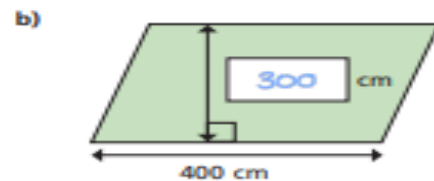


area =   $\text{cm}^2$

6 Find the missing lengths.

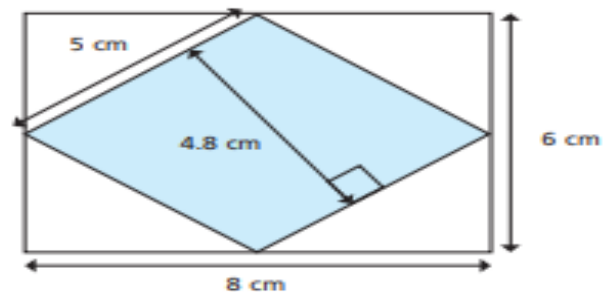


area =  $15 \text{ cm}^2$



area =  $12 \text{ m}^2$

7 Here is a rhombus inside a rectangle.



a) Calculate the area of the rhombus.

area =   $\text{cm}^2$

b)

The area of the rhombus is half the area of the rectangle. This means that it is a special triangle.



Explain to a partner why Mo is wrong.



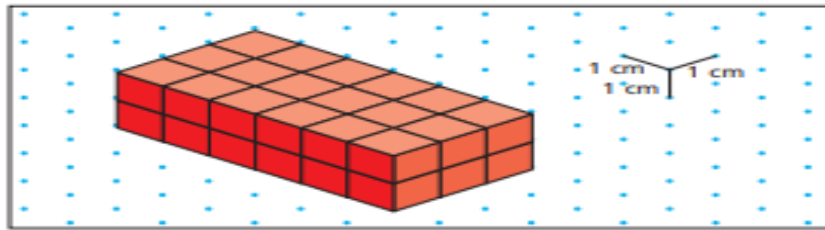


# Thursday

## Volume of a cuboid

White  
Rose  
Maths

- 1 Here is a cuboid made up of cubes.

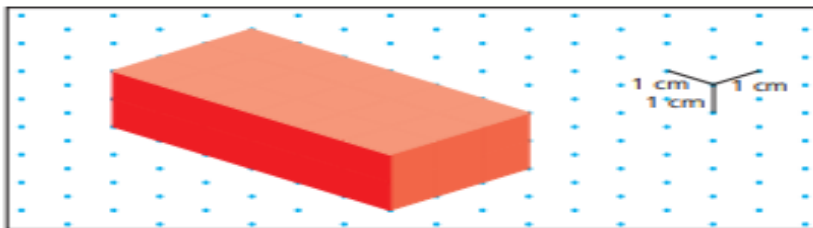


- a) What is the volume of the cuboid?

volume =   $\text{cm}^3$

- b) Explain your method for finding the volume.

- c) What is the volume of this cuboid?

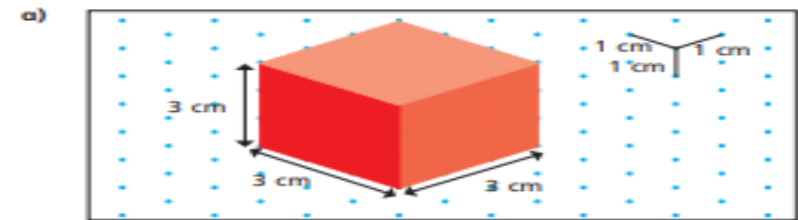


volume =   $\text{cm}^3$

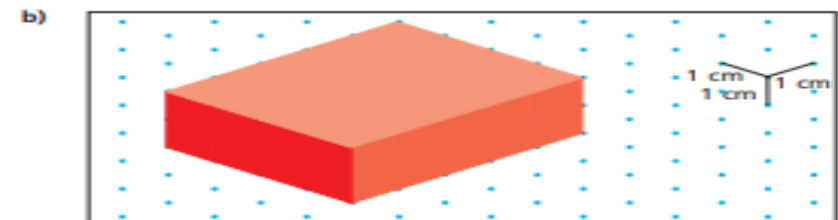
- d) What is the same and what is different about the cuboids?

- 2 Find the volume of the cuboids.

You can make them with cubes if it helps.

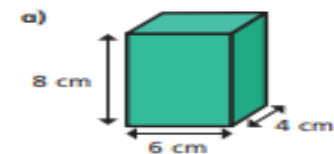


volume =   $\text{cm}^3$



volume =   $\text{cm}^3$

- 3 Calculate the volumes of the cuboids.



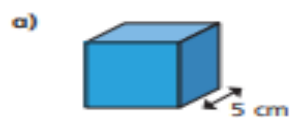
volume =   $\text{cm}^3$



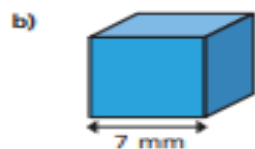
volume =   $\text{cm}^3$

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- 4 Calculate the volumes of the cubes.

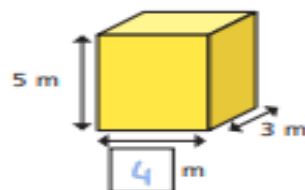


volume =   $\text{cm}^3$



volume =   $\text{mm}^3$

- 5 The volume of the cuboid is  $60 \text{ m}^3$ .  
Find the missing length.

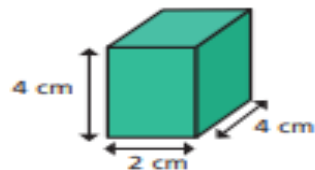


- 6 Calculate the volume of the cuboid.

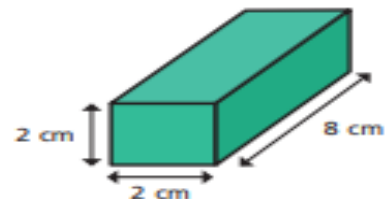


volume =   $\text{cm}^3$

- 7 a) Calculate the volumes of the two cuboids.



$\text{cm}^3$

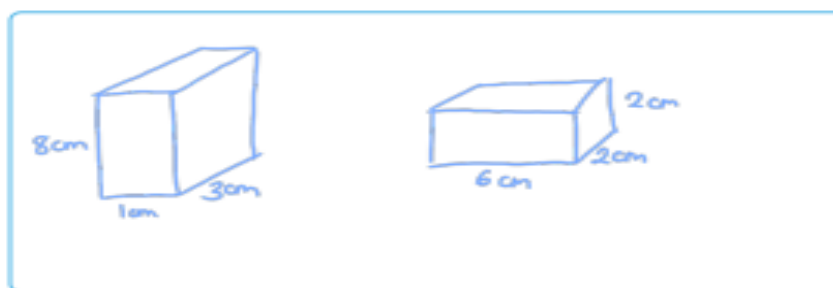


$\text{cm}^3$

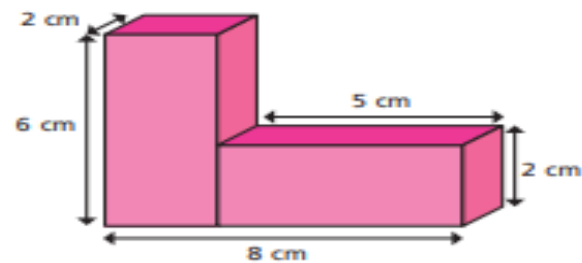
What do you notice?

- b) Draw two different cuboids that have a volume of  $24 \text{ cm}^3$

e.g.



- 8 Calculate the total volume of the shape.



volume =   $\text{cm}^3$

Was there another method you could have used?

