

Chapter 10

Perimeter and Area

Mathematics Revision

Worksheet

Name : _____

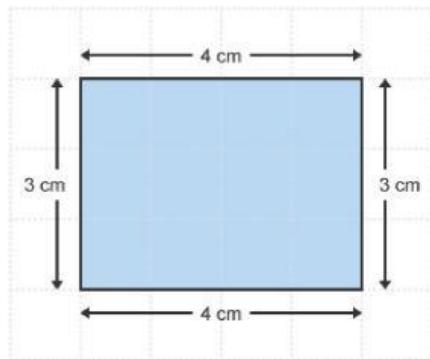
Date : _____

Performance:

Excellent Good Fair Poor

Learning Outcomes	
1. Understand that perimeter is the distance around a shape	
2. Compute the perimeter for various polygons and regular polygons	
3. understand that area is the amount of surface inside a region	
4. Develop and apply a formula for determining the area of regular polygon	
5. Understand the relationship between perimeter and area	
6. Solve problems involving the perimeter or area of polygons.	

Note



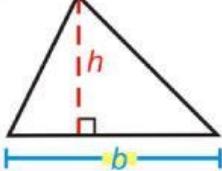
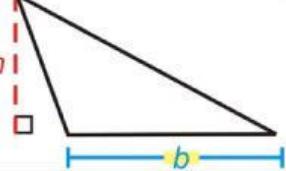
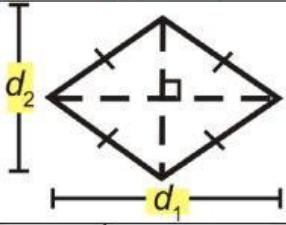
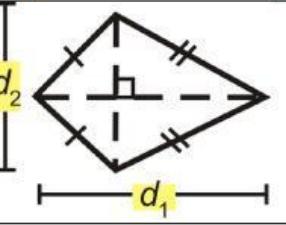
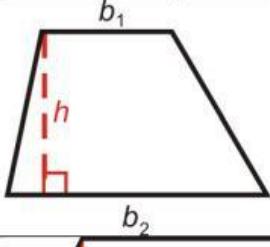
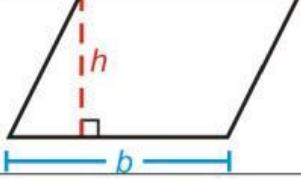
Perimeter is the distance around the outside of a shape.

$$\begin{aligned}\text{Perimeter} &= 4 \text{ cm} + 3 \text{ cm} + 4 \text{ cm} + 3 \text{ cm} \\ &= 14 \text{ cm}\end{aligned}$$

Area measures the space inside a shape.

$$\begin{aligned}\text{Area} &= 4 \text{ cm} \times 3 \text{ cm} \\ &= 12 \text{ cm}^2\end{aligned}$$

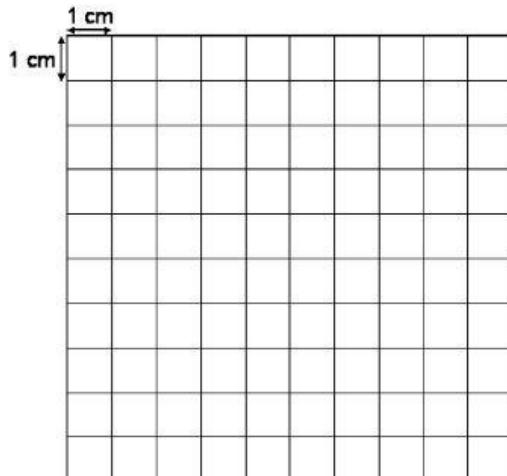
Area of polygons

Triangle	$A = \frac{1}{2} bh$			
Kite	$A = \frac{1}{2} d_1 d_2$			
Trapezium	$A = \frac{1}{2} (b_1 + b_2)h$			
Parallelogram	$A = bh$			

10.1 Perimeter

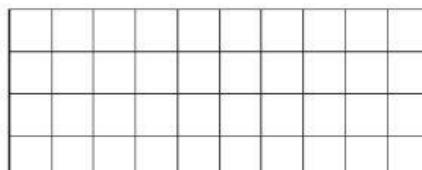
1. Draw a rectangle whose perimeter is 18 centimeters (cm).
You must use the lines of the grid.

Answer:

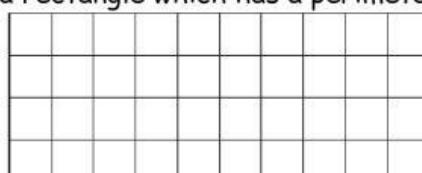


2. Here is a centimetre square grid.
On the grid draw a shape which has an area of 10 square centimetres

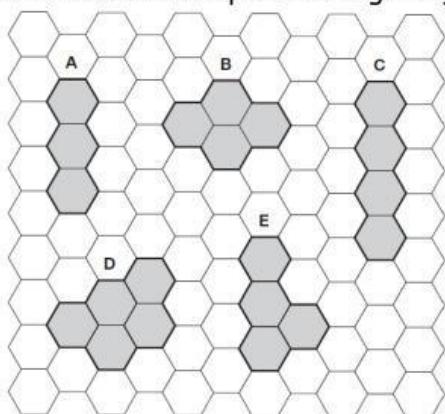
Answer:



On the grid below draw a rectangle which has a perimeter of 10 centimetres.



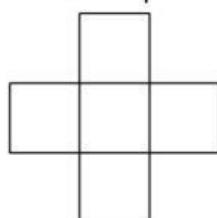
3. Here are five shapes on a regular grid.



Which shape has the longest perimeter?

Answer: _____

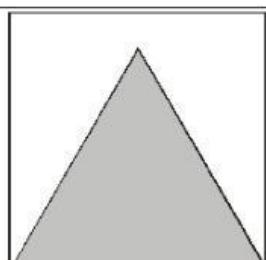
4. Diagram shows five squares with sides of 19 cm.



Calculate the perimeter of the entire diagram.

Answer:

5.



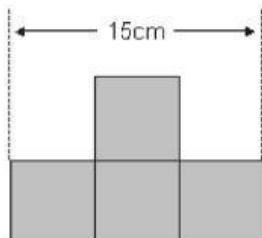
Here is an equilateral triangle inside a square.

The perimeter of the triangle is 48 centimeters.

What is the perimeter of the square?

Answer:

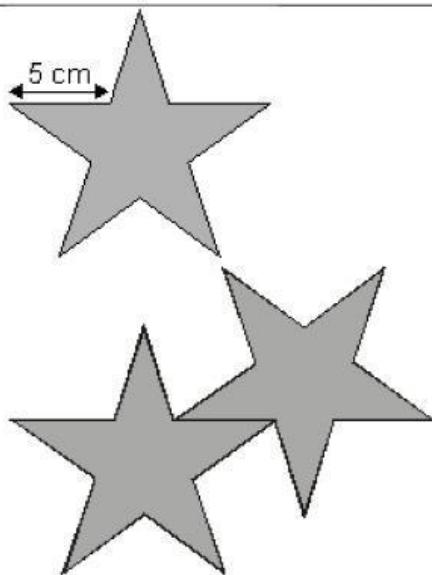
6.



This shape is made from 4 shaded squares.
Calculate the perimeter of the shape.

Answer:

7.



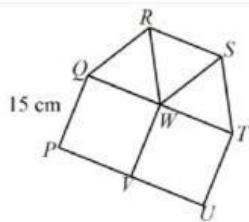
Millie has some star-shaped tiles.
Each edge of a tile is 5 centimetres long.

She puts two tiles together to make this shape.

Work out the perimeter of Millie's shape.

Answer:

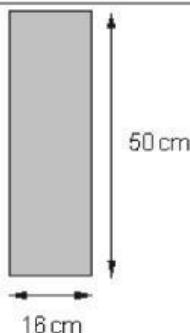
8. PQWV and VWTU are squares while QRW, RSW and STW are equilateral triangles.



Calculate the perimeter of the entire diagram

Answer:

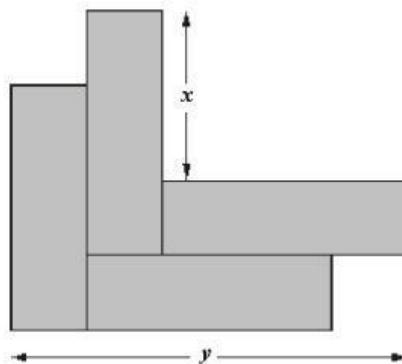
9.



Kate has some rectangles.

They each measure 16 centimetres by 50 centimetres.

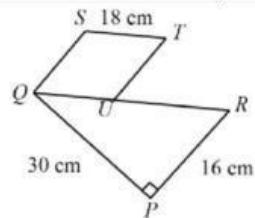
She makes this design with four of the rectangles



Work out the lengths x and y .

Answer:

10. QSTU is a rhombus and QUR is a straight line.



Given that $QR = 34$ cm. Calculate the perimeter of the entire diagram.

Answer:

11. Alfie has some rectangles.



He makes this shape using three of the rectangles.



What is the perimeter of Alfie's shape?

Answer:

12. The following quadrilaterals all have a perimeter of 36cm.
Here is a table to show the length of each side.

Complete the table.

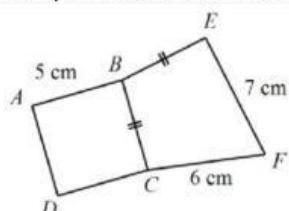
One quadrilateral is done for you.

Answer:



	Side lengths			
square	9cm	9cm	9cm	9cm
rectangle	3cm			
rhombus	9cm			
kite	10cm			

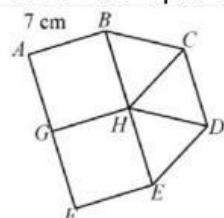
13. ABCD is a square and BEFC is a quadrilateral.



Calculate the perimeter of the entire diagram.

Answer:

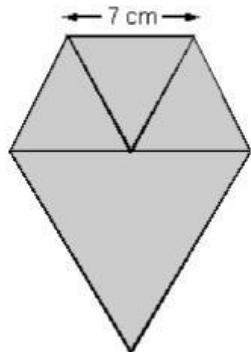
14. ABHG and GHEF are squares while BCH, CDH and DEH are equilateral triangles.



Calculate the perimeter of the entire diagram.

Answer:

15.



Answer:

Lauren has three small equilateral triangles and one large equilateral triangle.

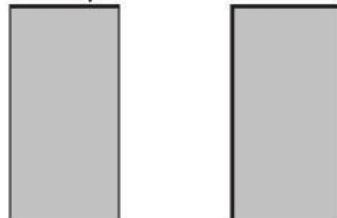
The small triangles have sides of 7 centimetres.

Calculate the perimeter of the shape.

16. The perimeter of a square is 72 centimetres.



The square is cut in half to make two identical rectangles

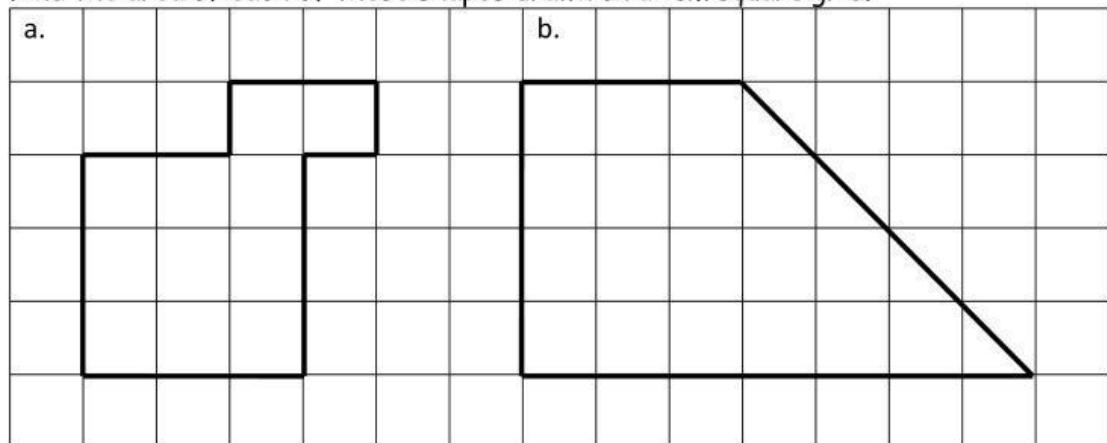


What is the perimeter of one rectangle?

Answer:

10.2 Area

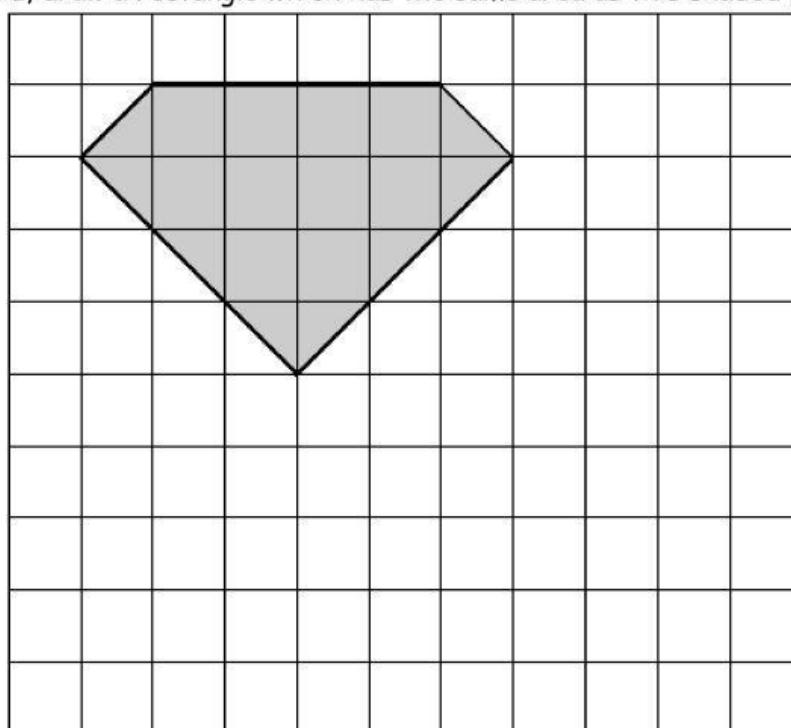
1. Find the area of each of these shapes drawn on a 1cm square grid.



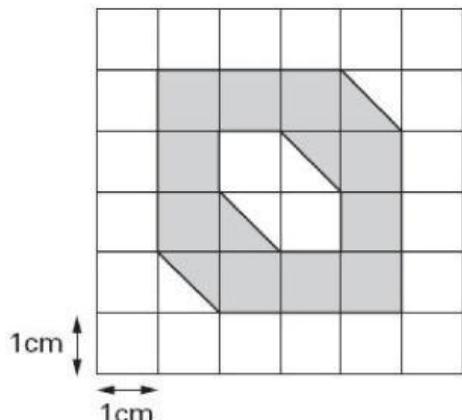
Answer: a. _____

b. _____

2. On the grid, draw a rectangle which has the same area as this shaded pentagon.



3.

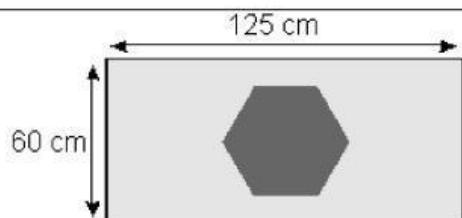


Here is a 1cm square grid.
Some of the grid is shaded.

What is the area that is shaded?

Answer : _____

4.



What is the area of this flag?

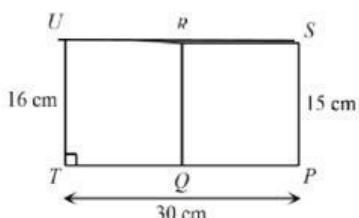
Answer :

20% of the flag is blue.

What area of the flag is blue?

Answer :

5.



PQRS is a square and PQT is a straight line
Calculate the area of the whole diagram.

Answer:

6.

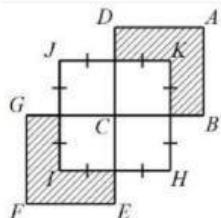


Diagram shows squares $ABCD$, $CEFG$ and $HIJK$.

Given that the area of $ABCD = CEFG = 64 \text{ cm}^2$ and the area of $HIJK = 100 \text{ cm}^2$.

Calculate the area of the shaded area.

Answer:

7.

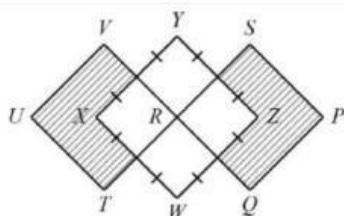


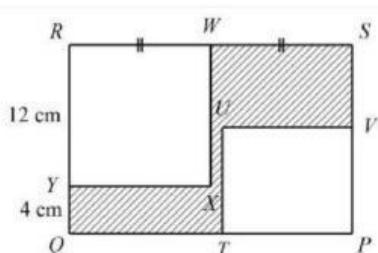
Diagram shows squares $PQRS$, $RTUV$ and $WXYZ$.

Given that the area of $PQRS = RTUV = 81 \text{ cm}^2$ and the area of $WXYZ = 100 \text{ cm}^2$.

Calculate the area of the shaded area.

Answer:

8.



$PQRS$ and $PTUV$ are rectangles while $RWXY$ is square.

Given that the area of shaded region is 141 cm^2 . Calculate the area of $PTUV$.

Answer:

9.

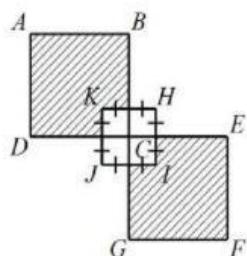


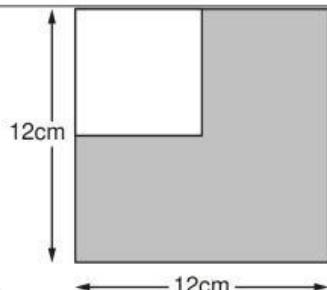
Diagram shows squares $ABCD$, $CEFG$ and HJK .

Given that the area of $ABCD = CEFG = 121 \text{ cm}^2$ and the area of $HJK = 36 \text{ cm}^2$.

Calculate the area of the shaded area.

Answer:

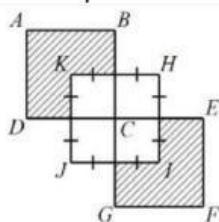
10.



A white square is painted in one corner of a grey square. Each side of the white square is half the length of a side of the grey square. What is the area of the grey section?

Answer:

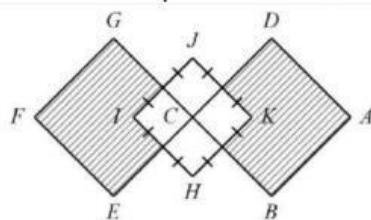
11. Diagram shows squares $ABCD$, $CEFG$ and HJK .



Given that the area of $ABCD = CEFG = 400 \text{ cm}^2$ and the area of $HJK = 400 \text{ cm}^2$. Calculate the area of the shaded area.

Answer:

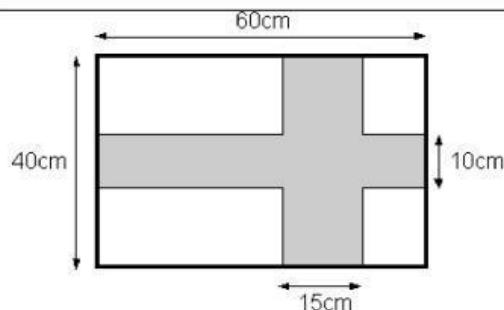
12. Diagram shows squares $ABCD$, $CEFG$ and $HJKL$.



Given that the area of $ABCD = CEFG = 256 \text{ cm}^2$ and the area of $HJKL = 144 \text{ cm}^2$. Calculate the area of the shaded area.

Answer:

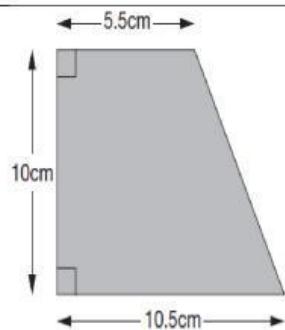
13.



Calculate the area of the shaded cross.

Answer:

14.

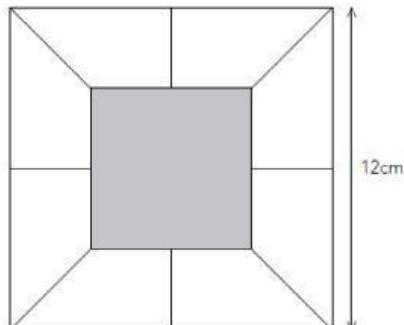


Here is a trapezium with a height of 10 centimetres.

The parallel sides are 5.5cm long and 10.5cm long. Find the area of the trapezium.

Answer:

15.



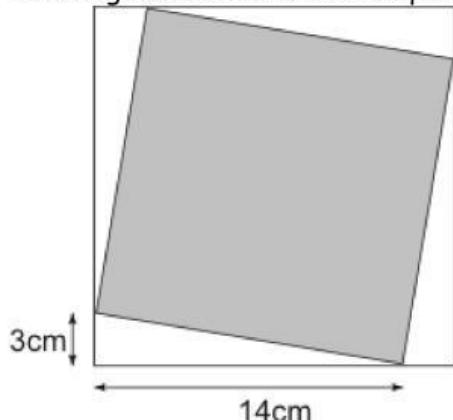
The diagram shows a square of side length 12 cm.

Inside the square are 8 congruent trapeziums and a shaded square.

The side length of the shaded square is 6 cm.
What is the area of one of the trapeziums?

Answer:

16. The diagram shows a shaded square inside a larger square



Calculate the area of the larger square.

Answer:

Calculate the area of the shaded square

Answer: