Planner

2-D shapes

- Finding the perimeter and area of compound 2-D shapes

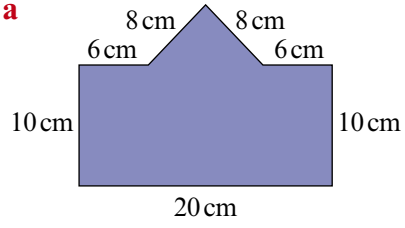
Keywords

You should know

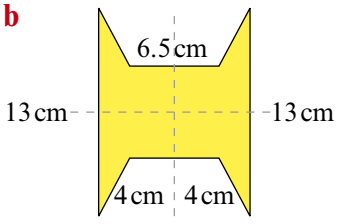
explanation 1a explanation 1b

1 Find the perimeter of each of these shapes.

a

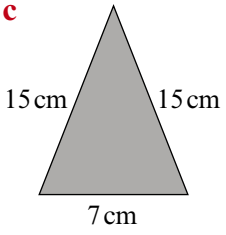


b

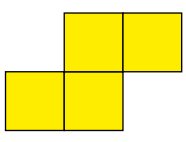


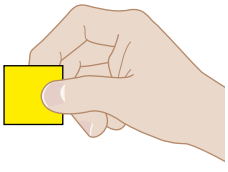
This is symmetrical.

c



2 Dillon has five square tiles with side 1 cm.
The tiles must be laid edge to edge.





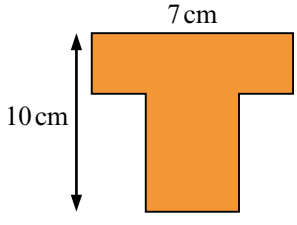
a Where should he put the last tile to make a shape that has the largest perimeter?

b Where should he put the last tile to make a shape that has the smallest perimeter?

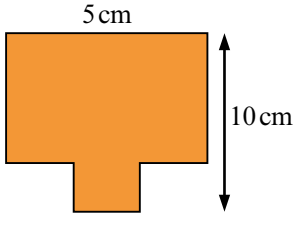
3 Kevin thinks that there is not enough information to find the perimeter of each of these shapes.

Explain why Kevin is wrong and find the perimeter of each shape.

a



b



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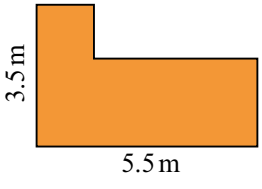
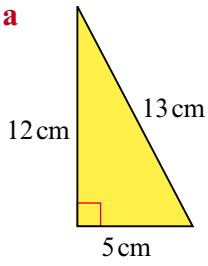


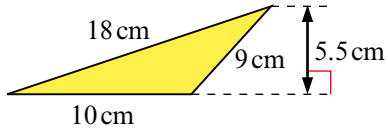
explanation 2a explanation 2b

4 For each triangle, find the perimeter and area.

a



b



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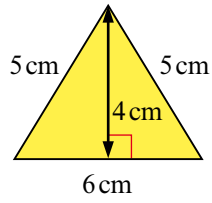
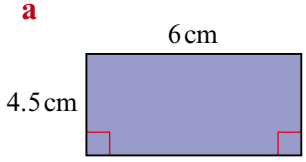


5 For each quadrilateral, find the perimeter and area.

a



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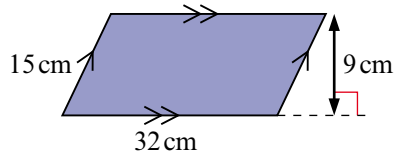

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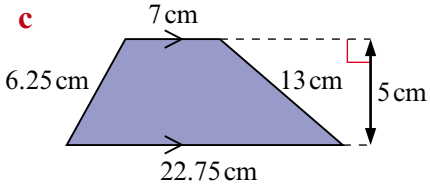
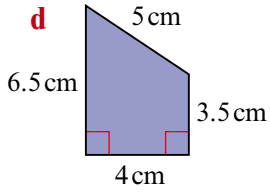
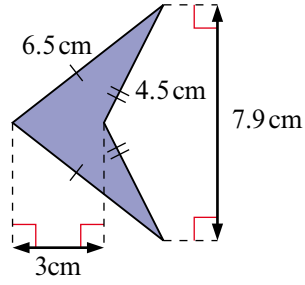


d

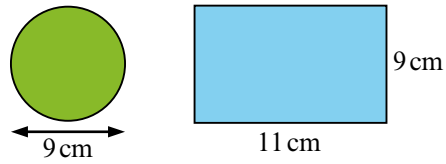


e



explanation 3a explanation 3b explanation 3c online

6 The diagram shows a circle and a rectangle.

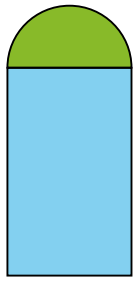


a Find the area and circumference of the green circle correct to 2 decimal places.

b Find the area of the blue rectangle.

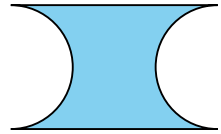
c Use your answers to find the area and perimeter of these shapes, correct to 1 decimal place.

i



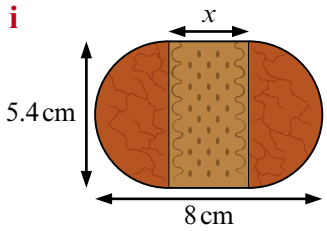
ii

iii

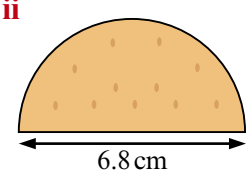


7 Graham makes some shapes using biscuits.

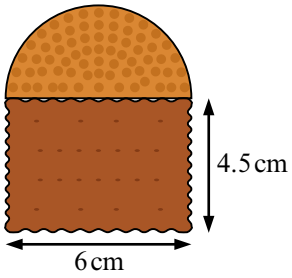
i



ii



iii



a Graham thinks that the value of x is 2.6 cm. Is he right?

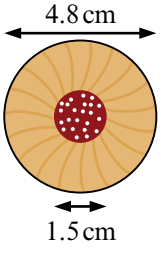
b Find the perimeter of each shape to 1 decimal place.

c Find the area of each shape correct to 1 decimal place.

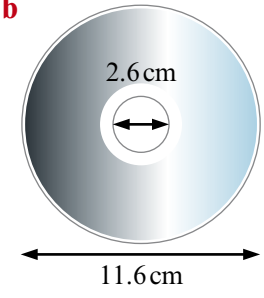
8 An annulus is the space trapped between two circles.
A CD label is an example of an annulus.

Find the area of each annulus to 2 decimal places.

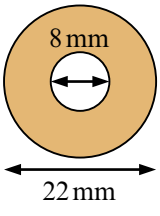
a



b

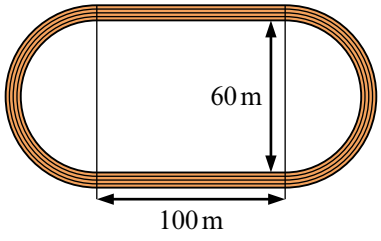


c



9 A running track is marked out on a school playing field.

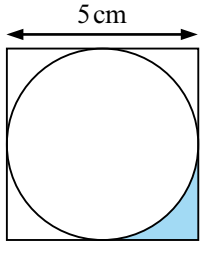
Find the distance round the track along the inside lane correct to 1 decimal place.



10 The diagram shows a square with side 5 cm and its inscribed circle.

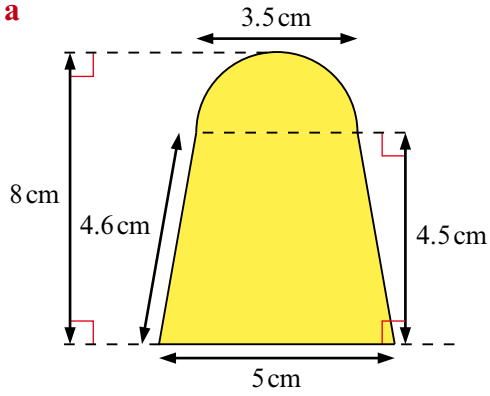
a Write some instructions to explain how to find the area of the shaded region.

b Follow your instructions and find the area of the shaded region correct to 2 decimal places.

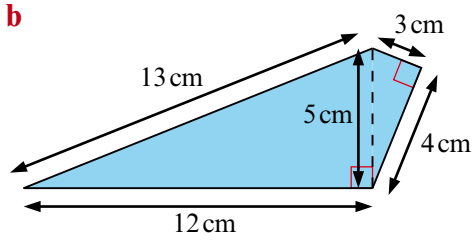


11 Find the area and perimeter of each shape.

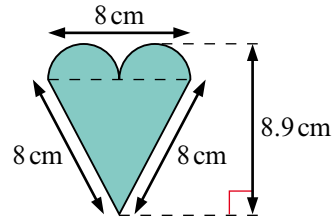
a



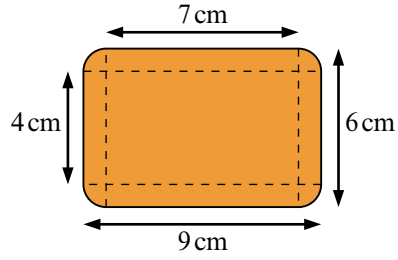
b



12 Find the area and perimeter of the kite-mark symbol to 1 decimal place.

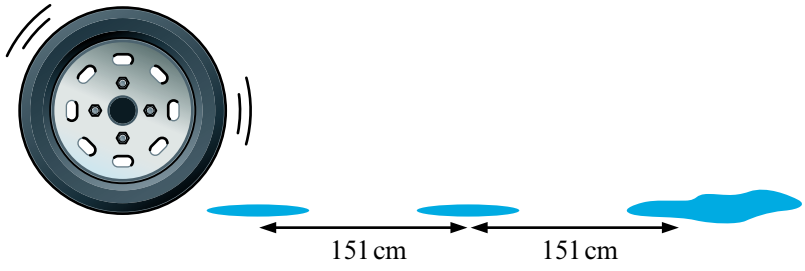


13 Find the area and perimeter of this name plaque to 1 decimal place.



explanation 4 online

14 A car tyre rolls over a puddle and leaves a mark every 151 cm. Work out the diameter of the car tyre.



15 Find the diameters of circles with these circumferences.

a circumference = 50 cm **b** circumference = 80 cm