Lesson 2

Perimeter, Area & Volume : Year 9

Non Calculator

2.1 In this lesson we will...

- Calculate the AREA of triangles, rectangles and circles.
- Calculate the PERIMETER of triangles, rectangles and circles.

2.2 Formulae

	Area	Perimeter	notes
Rectangle	$l \times b$	$2(l + b)$	l is length, b is breadth
Triangle	$\frac{1}{2} \times b \times h$		b is base, h is height
Circle	πr^2	$2 \pi r$	π = 3.14..., r is radius

2.3 Examples

(i) Find the area of a triangle with a base of length 7 cm and a height of 12 cm.

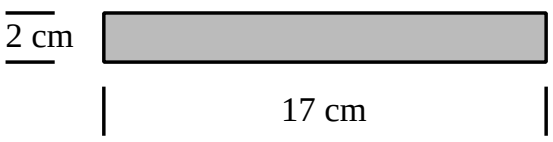
(ii) The perimeter of a circle is given a special name.
What is it ?

(iii) Find the area of a circle of radius 7 cm.
Use $\pi = 3$ to make the mental arithmetic calculation easier.

2.4 Exercise

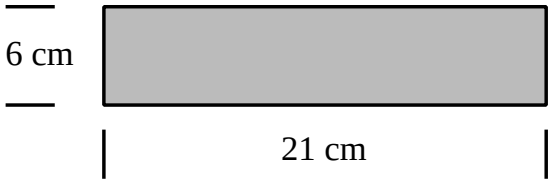
Question 1

Find the AREA of this rectangle;

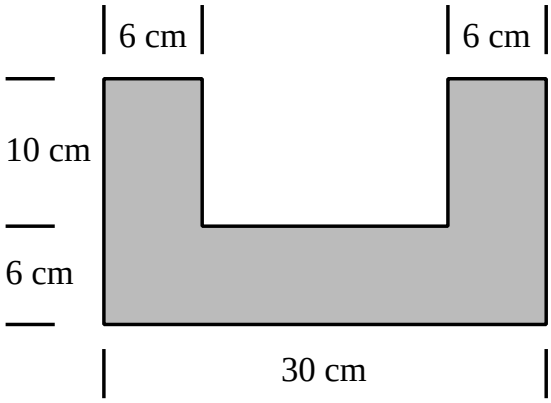


Question 2

Find the PERIMETER of this rectangle;



Question 3



(i) Find the AREA of the shape.

(ii) Find the PERIMETER of the shape.

Question 4

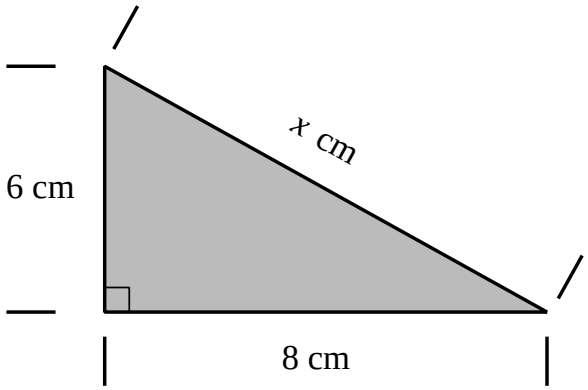
(i) Write down the value of 6^2

(ii) Write down the value of 8^2

(iii) Write down the value of $6^2 + 8^2$

(iv) Write down the value of $\sqrt{6^2 + 8^2}$

(v) Consider the triangle shown below;



A famous theorem says that the length marked x cm will be;

$$x = \sqrt{6^2 + 8^2}$$

What is the name of this famous theorem ?

(vi) Calculate the PERIMETER of this triangle.

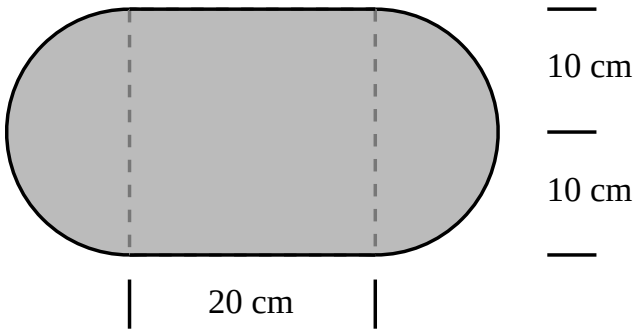
Question 5

Find the AREA of a triangle with a base of length 9 cm and a height of 14 cm.

Question 6

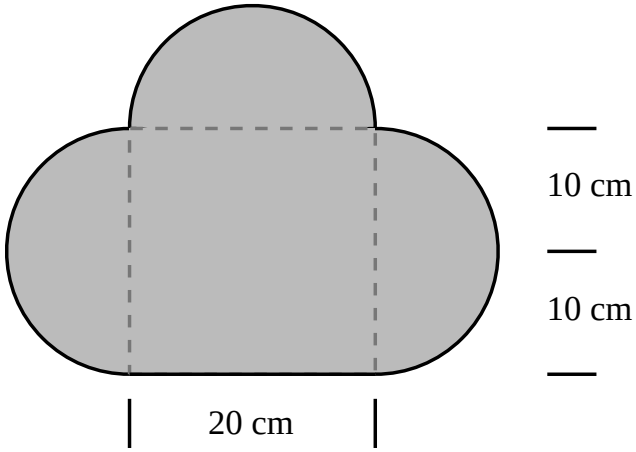
(i) Find the AREA of a circle of radius 10 cm.
Use π = 3.14 in your mental arithmetic calculation.

(ii)



Find the AREA of the shape.
Hint: Your part **(i)** answer will be useful.

(iii)



Find the AREA of the shape.
HINT: Your part **(i)** and **(ii)** answers will be useful.