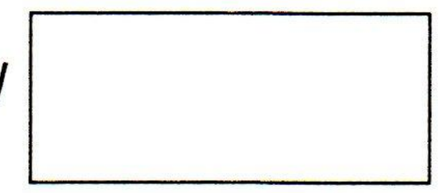
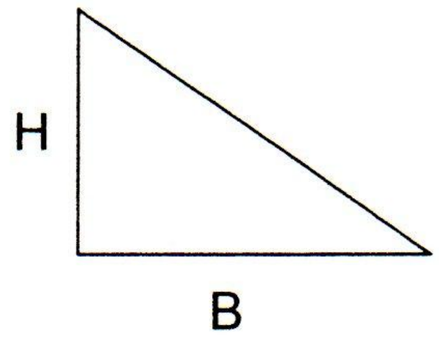
Area and perimeter

Perimeter: Perimeter is the distance all the way around the outside of a 2D shape.
To find a perimeter, add up the length of all sides.



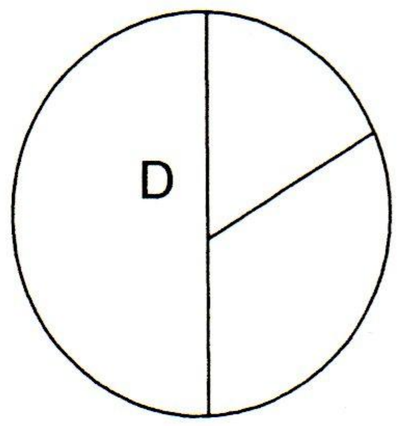
Area: The formula to calculate area of different shapes are-
Area of rectangle= Length (L) x Width (W)
Area of square = Length x Length

Area of triangle = ½ Base x Vertical Height



Circumference of circle = distance round the outside of the circle
= π x diameter

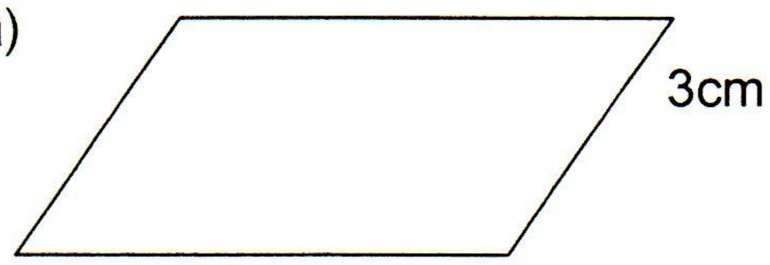
Area of Circles = π x $(radius)^2$ [π= 3.14]



Exercise: 10

Q1 Identify the shapes and find their perimeters.

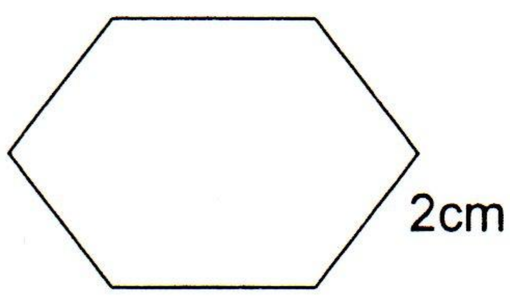
a)



Name: _____

Perimeter:_____

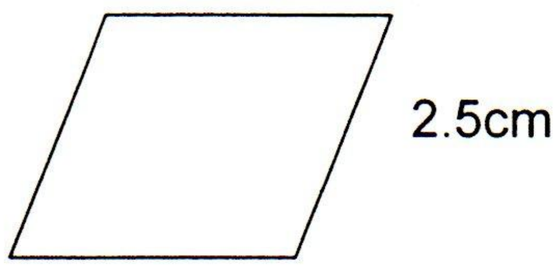
b)



Name: _____

Perimeter:_____

c)

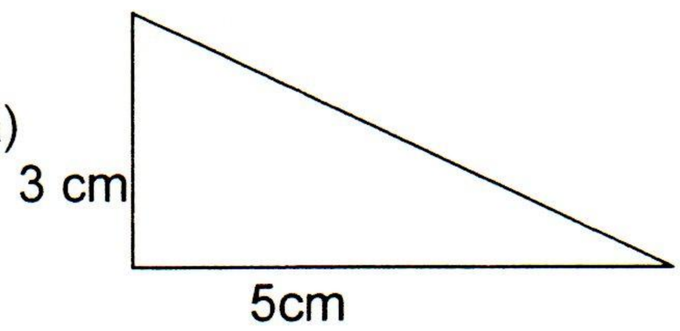


Name: _____

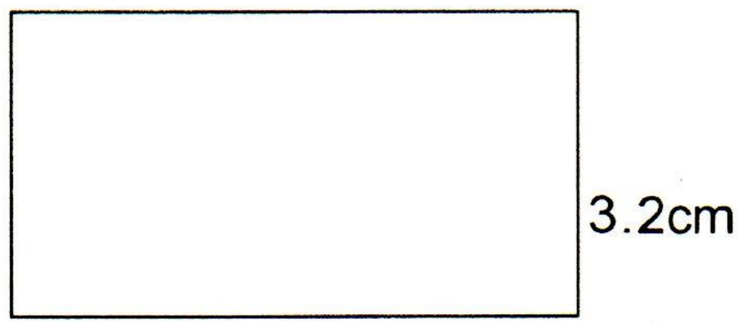
Perimeter:_____

Q2 Find the area of the following shapes

a)

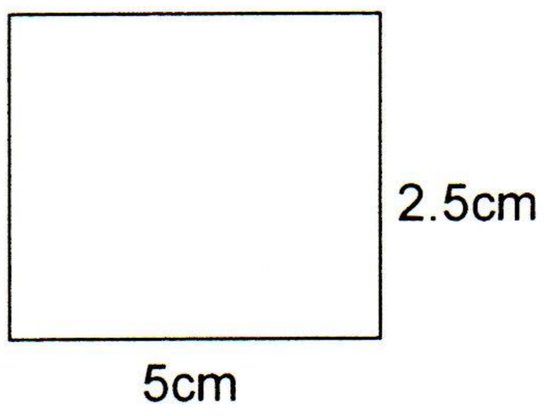


A= _____



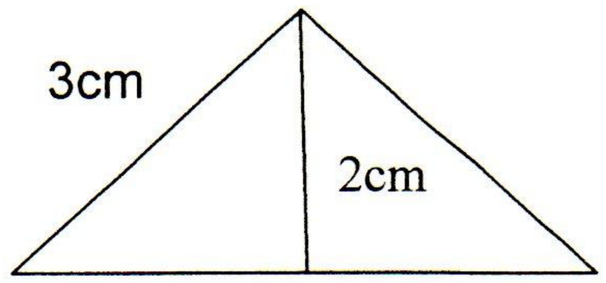
A= _____

c)



A= _____

d)



A= _____

Q3

Q4 Find the area of a rectangle with length of 1.5m and width of 5.0m.

_____

Q5 Find the length of a rectangle whose area is $24cm^2$ and width is 4cm.

_____

Q6 Find the length of a rectangle whose area is $34cm^2$ and width is 4cm.

_____

Q7 Find the width of a rectangle whose area is $4.2cm^2$ and length is 6cm.

_____

Q8 Find the length of a square whose area is $81cm^2$.

_____

Q9 Find the length of a square whose area is $0.49m^2$.

_____

Q10 Find the area of a square whose perimeter is 16cm.

_____

Q11 Find the area of a square whose perimeter is 24cm.

_____

Q12 Find the perimeter of a square whose area is $49cm^2$.

_____

Q13 The area of a square and a rectangle is same, if the length and width of rectangle is 9m and 4m. Then find the side length of the square.

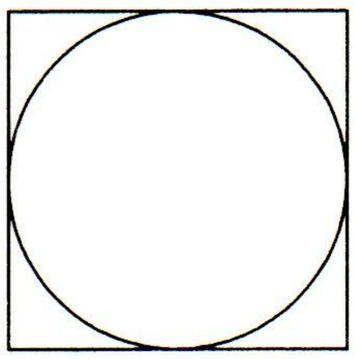
_____

Q14 The length of a rectangle is twice of its width. If the width is 6cm then find its area.

Q15 The width of a rectangle is half of its length. If the width is 2.5cm then find its area.

Q16 The width of a rectangular playground is half of its length. The total area of the playground is $200m^2$, then find its length and width.

Q17 Look at this shape, the circle exactly fits into the square. If the length of the square is 4cm then find the circumference of the circle.



Q18 The length of regular triangle is 5cm. A square has the same perimeter as of triangle, then find the side length of square.

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19. Which is the name for the distance around a circle?_____

20. Which is the name for the distance from the centre of the circle to its edge?_____

Circle

21. Find the area and the circumference of a circle having

a) Radius : 12 cm Area= _____, Circumference =_____

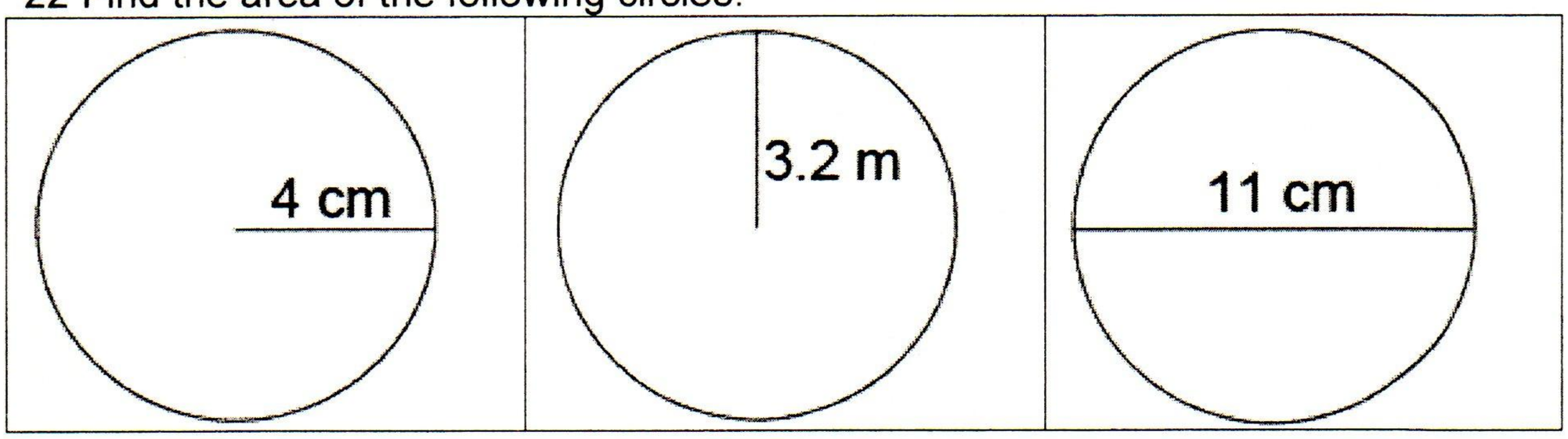
b) Radius : 4.5 cm Area= _____, Circumference =_____

c) Radius : 7 cm Area= _____, Circumference =_____

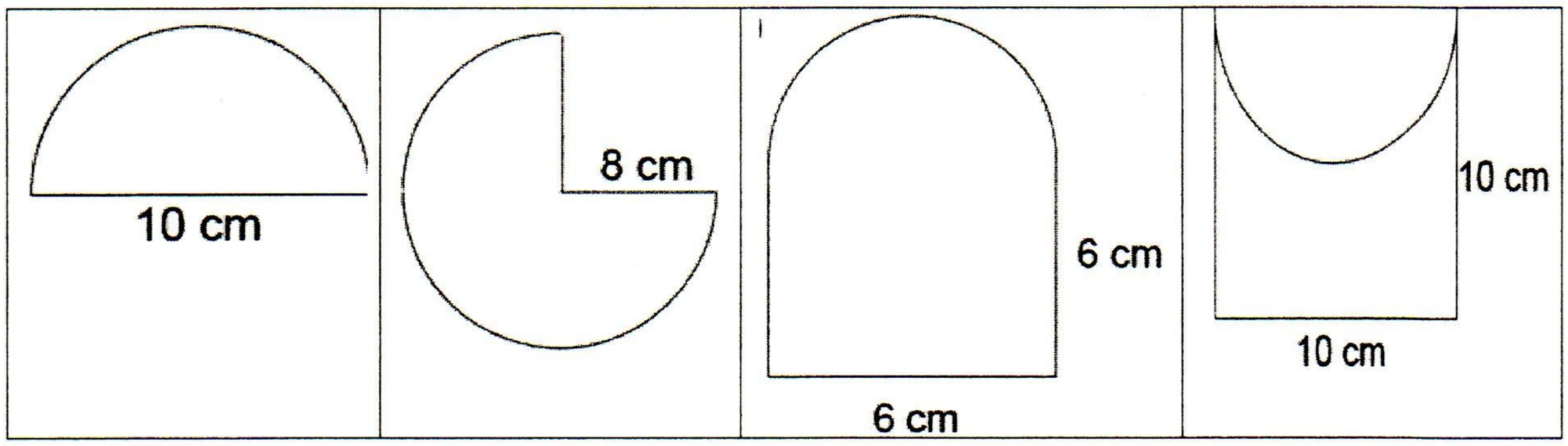
d) Diameter : 12 cm Area= _____, Circumference =_____

e) Diameter : 3 m Area= _____, Circumference =_____

22 Find the area of the following circles.

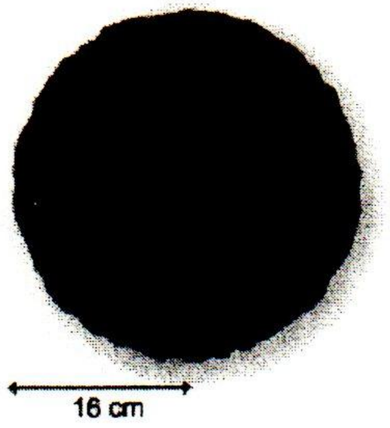


23 Find the area of the following shapes. Remember a semi-circle is ½ a circle.



24 The centre circle of a football pitch has a diameter of 7 m. Calculate the area of the centre circle.

Find the circumference of the biscuit below using the value Pi = 3.14.



25) Find the area of the following shapes. You can split the figure into different known shapes

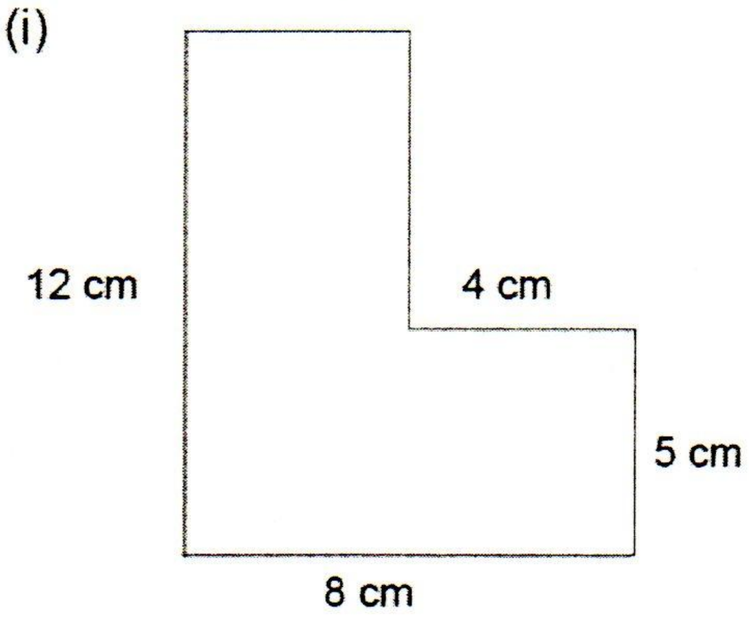
Area Rectangle **= L x W**

Area Parallelogram = B x H

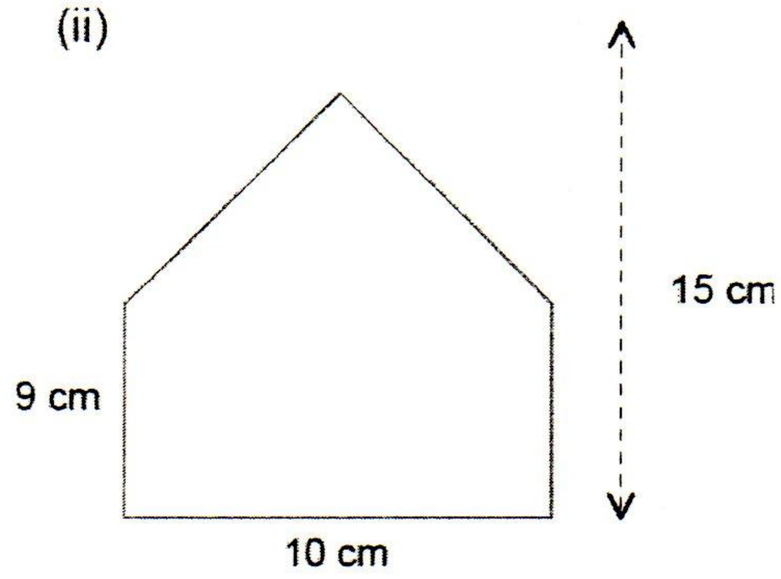
Area Triangle **= ½ B x H**

Area Trapezium = ½(a + b) x H

(i)

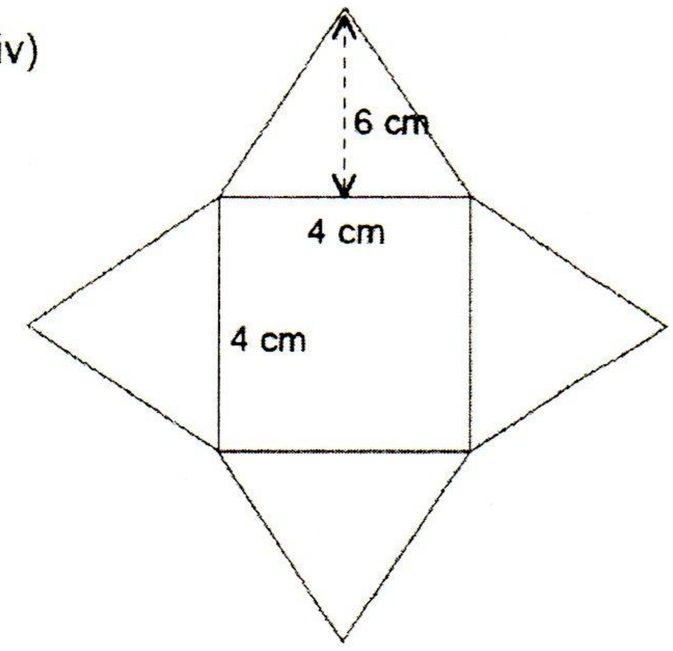


(ii)

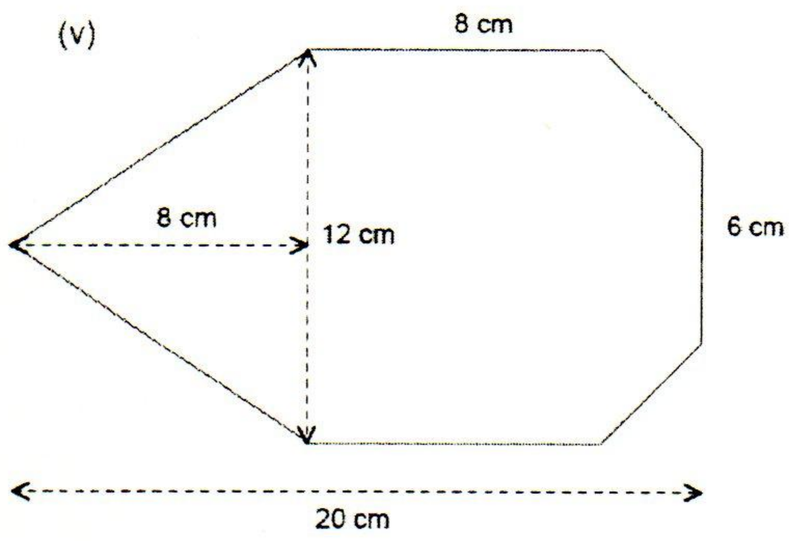


(iii)

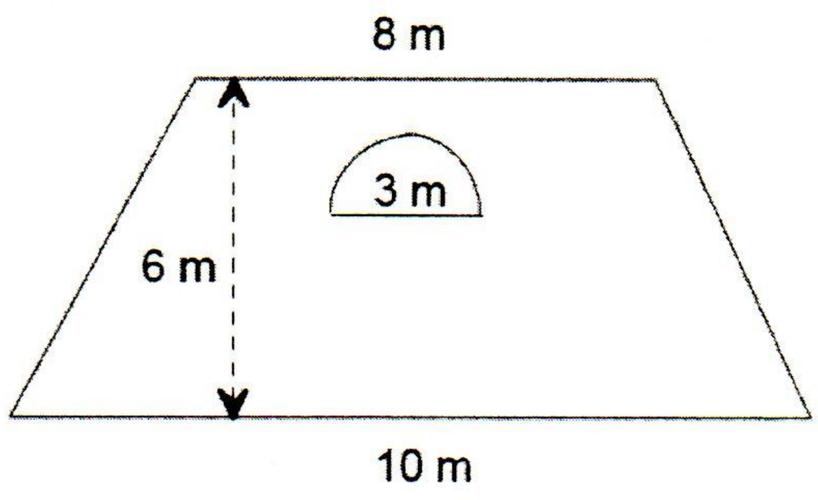
(iv)



(v)



vi) The diagram below shows a trapezoidal garden with a semicircular fish pond.



Calculate the area of the garden not including the fish pond.