Corbett maths

Area of a Circle

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Examples

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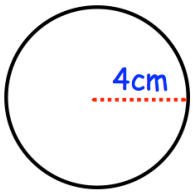
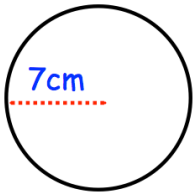
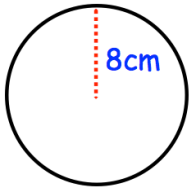
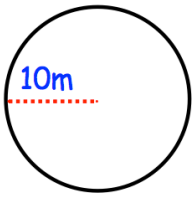
Workout

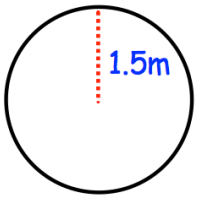
Question 1: Calculate the area of the following circles. Give your answers to 1 decimal place.

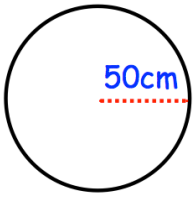
(a) 

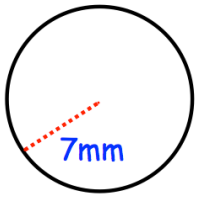
(b) 

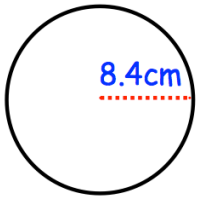
(c) 

(d) 

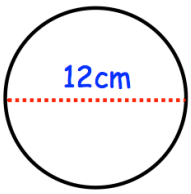
(e) 

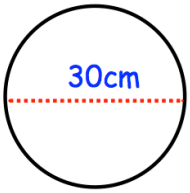
(f) 

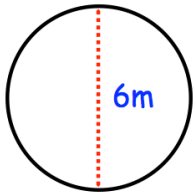
(g) 

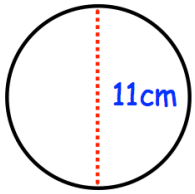
(h) 

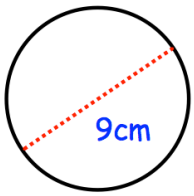
Question 2: Calculate the area of the following circles. Give your answers to 1 decimal place.

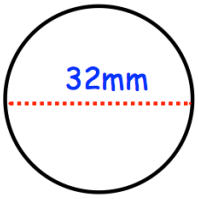
(a) 

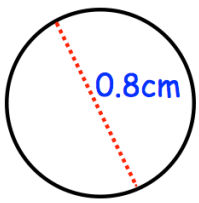
(b) 

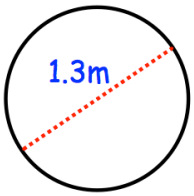
(c) 

(d) 

(e) 

(f) 

(g) 

(h) 

Question 3: Work out the area of the following circles. Give your answers to 1 decimal place.

(a) A circle with radius 9cm
(b) A circle with radius 12m
(c) A circle with diameter 40cm
(d) A circle with diameter 1km
(e) A circle with diameter 5 yards
(f) A circle with radius 10.5m

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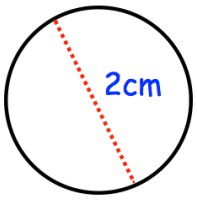
Question 4: Calculate the area of the following circles. Give your answers to 1 decimal place.

(a)



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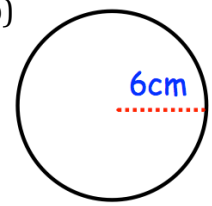
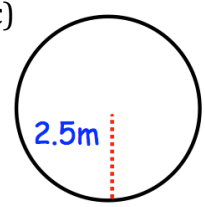
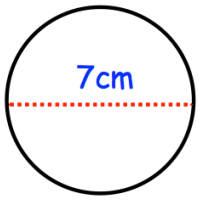


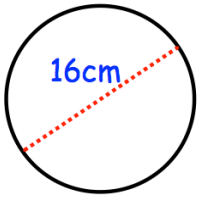
(c)



(d)



(e)



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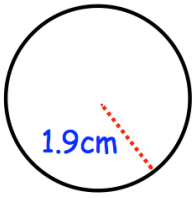
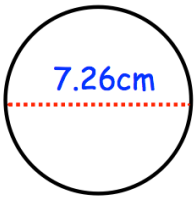
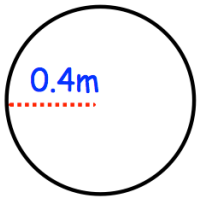


(g)

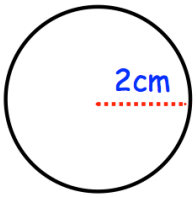


(h)

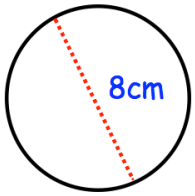


Question 5: Calculate the area of the following circles. Leave your answer in terms of π

(a)



(b)



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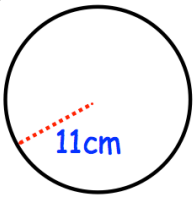

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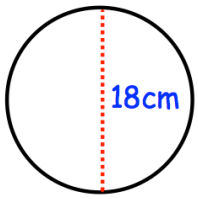
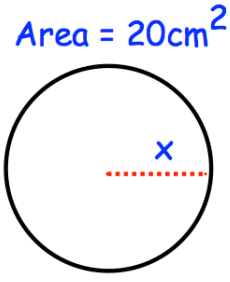


Question 6: Work out the area of the following circles. Leave your answer in terms of π

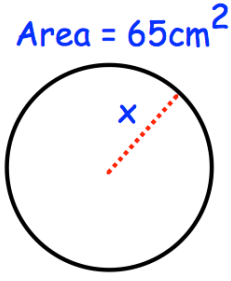
(a) A circle with radius 7cm
(b) A circle with radius 1cm
(c) A circle with diameter 10cm
(d) A circle with radius 3cm
(e) A circle with diameter 4cm

Question 7: Find the size of the radius for each of the following circles.
Give your answer to 2 decimal places.

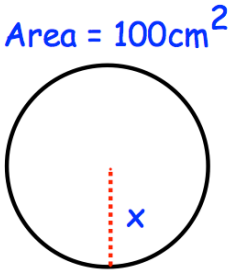
(a)



(b)



(c)



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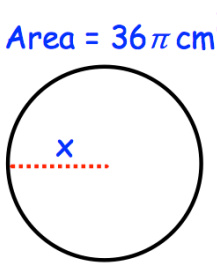

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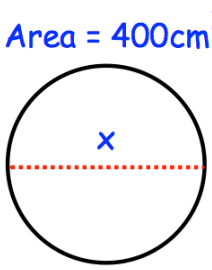
Question 8: Find the size of the diameter for each of the following circles.
Give your answer to 2 decimal places.

(a)



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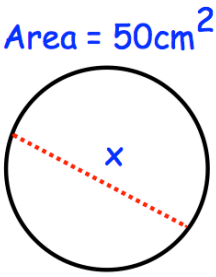
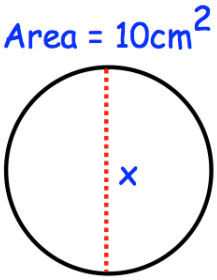
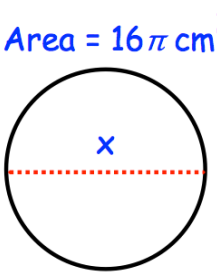


(c)



(d)

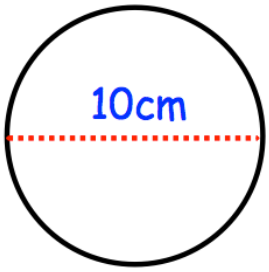


Apply

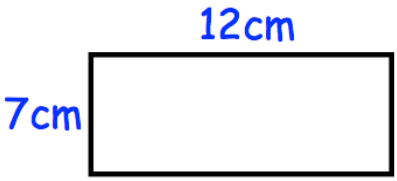
Question 1: A circular table top has a diameter of 90cm. Work out the area of the table top.

Question 2: A circular badge has radius 3cm. Calculate the area of the badge.

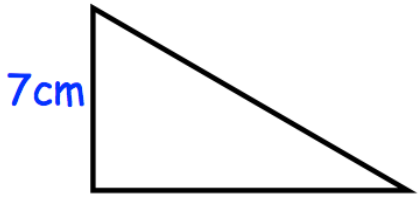
Question 3: Shown below is a circle, a rectangle and a right angled triangle.
Which shape has the greatest area?



Shape A



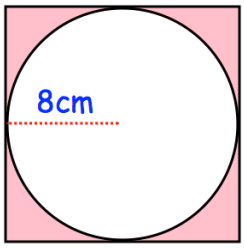
Shape B



Shape C

Question 4: Calculate the shaded area for each shape below.

(a)



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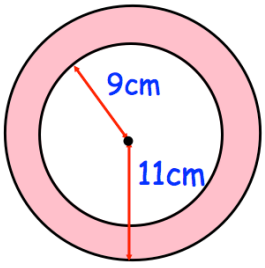
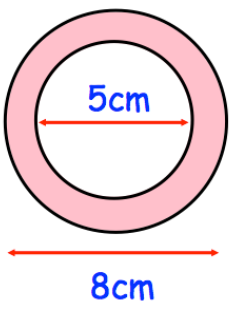


(c)



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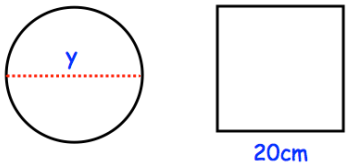
Question 5: The circle and square have the same area. Find y, the diameter of the circle.



Question 6: The circumference of a circle is 60cm.
Work out the area of the circle.

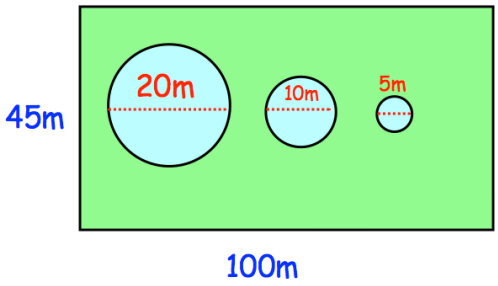
Question 7: The circumference of a circle is 1m.
Work out the area of the circle.

Question 8: The area of a circle is $80cm^2$.
Work out the circumference of the circle.

Question 9: The area of a circle is $2m^2$.
Work out the circumference of the circle.

Question 10: A rectangular lawn is 100m long and 45m wide.
There are 3 circular ponds, with diameters of 20m, 10m and 5m respectively.
Mrs Jones wants to cover the lawn with grass seed.
Each packet of grass seed covers $50m^2$ and costs £1.49

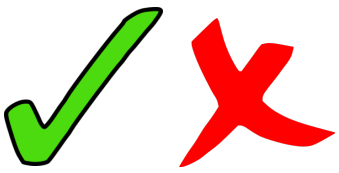
How much will it cost Mrs Jones to cover the lawn with grass seed?



Question 11: A circular plaque of diameter 6cm is cut from a square piece of metal with side length 6cm.

What percentage of the metal is wasted?

Answers



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