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

(a) [Diagram of a circle with radius 4cm]
(b) [Diagram of a circle with radius 7cm]
(c) [Diagram of a circle with radius 8cm]
(d) [Diagram of a circle with radius 10m]
(e) [Diagram of a circle with radius 1.5m]
(f) [Diagram of a circle with radius 50cm]
(g) [Diagram of a circle with radius 7mm]
(h) [Diagram of a circle with radius 8.4cm]

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

(a) [Diagram of a circle with radius 12cm]
(b) [Diagram of a circle with radius 30cm]
(c) [Diagram of a circle with radius 6m]
(d) [Diagram of a circle with radius 11cm]
(e) [Diagram of a circle with radius 9cm]
(f) [Diagram of a circle with radius 32mm]
(g) [Diagram of a circle with radius 0.8cm]
(h) [Diagram of a circle with radius 1.3m]

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

(a) \(2\text{cm}\)  
(b) \(6\text{cm}\)  
(c) \(2.5\text{m}\)  
(d) \(7\text{cm}\)

(e) \(16\text{cm}\)  
(f) \(1.9\text{cm}\)  
(g) \(7.26\text{cm}\)  
(h) \(0.4\text{m}\)

Question 5: Calculate the area of the following circles. Leave your answer in terms of \(\pi\)

(a) \(2\text{cm}\)  
(b) \(8\text{cm}\)  
(c) \(11\text{cm}\)  
(d) \(18\text{cm}\)

Question 6: Work out the area of the following circles. Leave your answer in terms of \(\pi\)

(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) Area = \(20\text{cm}^2\)  
(b) Area = \(65\text{cm}^2\)  
(c) Area = \(100\text{cm}^2\)  
(d) Area = \(36\pi\text{cm}^2\)
Question 8: Find the size of the diameter for each of the following circles. Give your answer to 2 decimal places.

(a) \[ \text{Area} = 400\text{cm}^2 \]

(b) \[ \text{Area} = 50\text{cm}^2 \]

(c) \[ \text{Area} = 10\text{cm}^2 \]

(d) \[ \text{Area} = 16\pi\text{cm}^2 \]

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?

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

(a) 

(b) 

(c)
Area of a Circle
Videos 40, 59 on Corbettmaths

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

\[
\text{Area of circle} = \text{Area of square}
\]

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

© CORBETTMATHS 2016