Find the Radius and Diameter when given the Area

Maths

Mr Lund

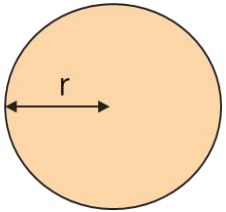
Find the Radius and Diameter when given the Area

1. $A = \pi r^2$ has been rearranged to make r the subject.

$r = \sqrt{\frac{A}{\pi}}$ $\quad \frac{A}{\pi} = r$ $\quad r = \sqrt{\frac{\pi}{A}}$

Choose the correct answer.

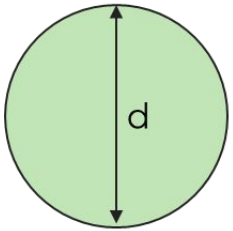
2. The area of the circle is 50.27 cm^2.



Calculate the radius of the circle to 3 significant figures.

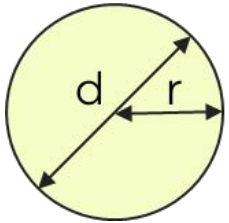
3.The area of the circle is 201 cm^2.

Calculate the diameter to 3 significant figures.



4. The area of the circle is 804 cm^2.

Calculate the radius and the diameter, to 3 significant figures.



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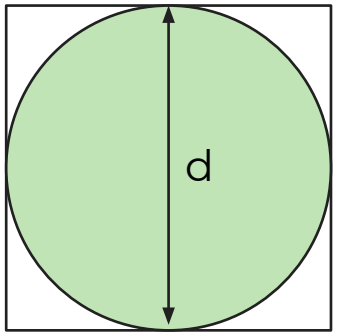
5. The area of the circle is 16 m^2.

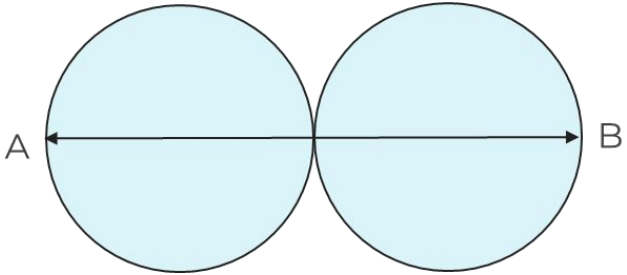


a) To 3 significant figures, what is the area of the square?

b) What percentage of the square is the circle?

6. The total area of these identical circles is 60m^2.

The line AB passes through the centres of both circles.



What is the distance of the line AB to 3 significant figures?

Answers

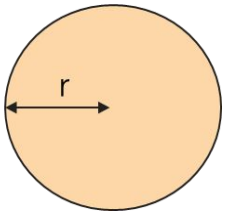
Find the Radius and Diameter when given the Area

1. $A = \pi r^2$ has been rearranged to make r the subject.

$r = \sqrt{\frac{A}{\pi}}$ $\frac{A}{\pi} = r$ $r = \sqrt{\frac{\pi}{A}}$

Choose the correct answer.

2. The area of the circle is 50.27 cm^2.

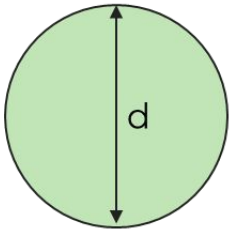


$\sqrt{\frac{50.27}{\pi}} = 4.0cm$

Calculate the radius of the circle to 3 significant figures.

3.The area of the circle is 201 cm^2.

Calculate the diameter to 3 significant figures.

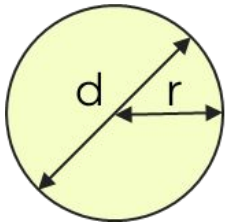


radius = $\sqrt{\frac{201}{\pi}} = 8.0cm$

Diameter = 8.0 x 2 = 16 cm

4. The area of the circle is 804 cm^2.

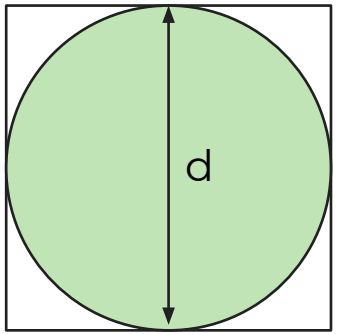
Calculate the radius and the diameter, to 3 significant figures.



radius = $\sqrt{\frac{804}{\pi}} = 16$ diameter = 32cm

Find the Radius and Diameter when given the Area

5. The area of the circle is 16 m^2.

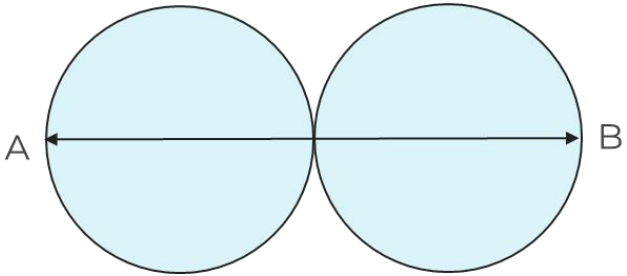


a) To 3 significant figures, what is the area of the square? 20.3 m^2

b) What percentage of the square is the circle? $\frac{16}{20.3}$ = 78.8%

6. The total area of these identical circles is 60m^2.

The line AB passes through the centres of both circles.



Diameter of one circle is 6.18

What is the distance of the line AB to 3 significant figures? 6.18 x 2 = 12.4 m