Volume of a Cylinder

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Examples

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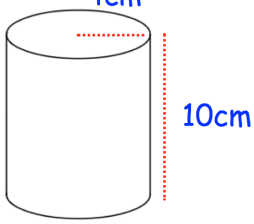
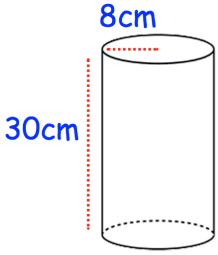
Workout

Question 1: Work out the volume of each cylinder.
Give each answer to one decimal place.

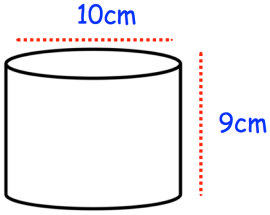
(a)



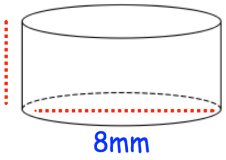
(b)



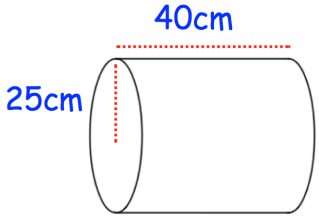
(c)



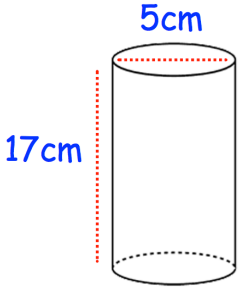
(d)



(e)

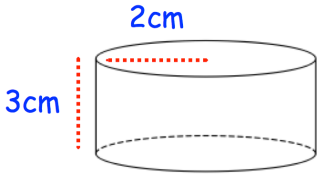


(f)

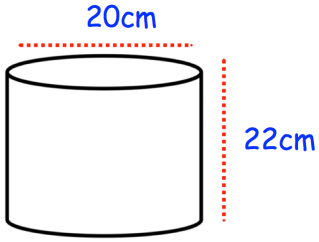


Question 2: Work out the volume of each cylinder.
Give each answer in terms of **π**.

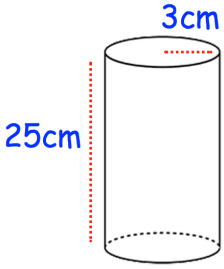
(a)



(b)

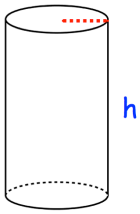


(c)



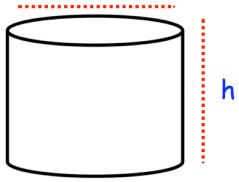
Question 3: Work out the height of each cylinder.
Give each answer to one decimal place.

(a)



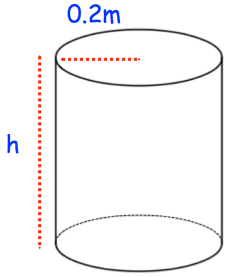
Volume = 1600cm³

(b)



Volume = 800cm³

(c)



Volume = 0.11m³

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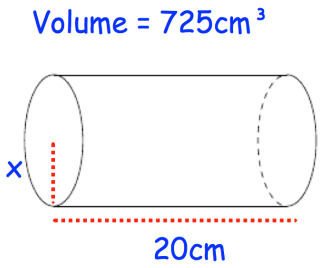
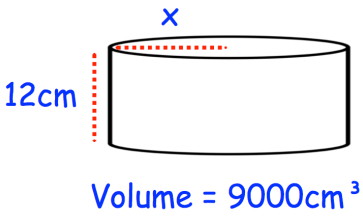
Question 4: Work out the value of x.
Give each answer to one decimal place.

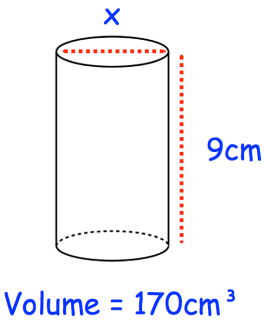
(a)



(b)

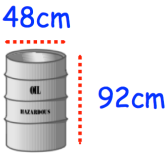


(c)



Apply

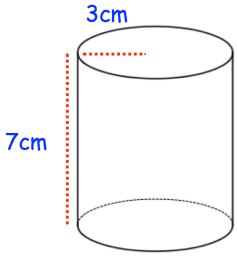
Question 1: A cylindrical oil drum has a diameter of 48cm and a height of 92cm.
Calculate the volume of the oil drum.



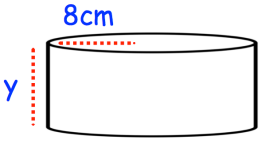
Question 2: A cylinder has a radius of 2m and a height of 5cm.
Work out the volume of the cylinder in terms of **π**.

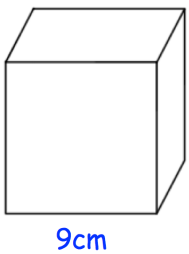
Question 3: Timothy is filling cups with orange juice.
Each cup is a cylinder with radius 3cm and height 7cm.
Timothy has 2 litres of orange juice.
1 litre = $1000cm^3$

How many cups can be filled?



Question 4: Shown below is a cylinder and a cube.
The volume of the cylinder is equal to the volume of the cube.
Find y.





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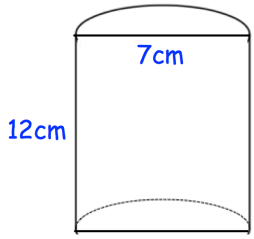
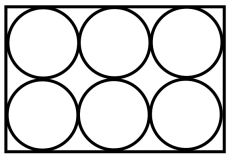
Question 5: Calculate the volume of this shape.

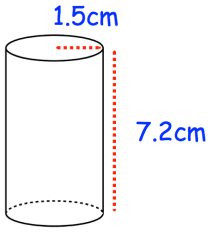


Question 6: 6 cylinders are placed in a crate as shown below.
The radius of each cylinder is 4cm and the height of each cylinder is 14cm.
The crate also has a height of 14cm.



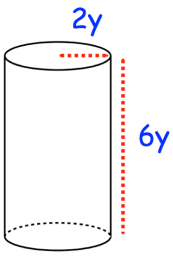
What percentage of space in the crate is empty?

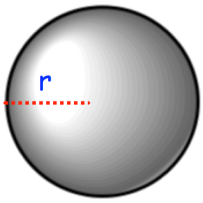
Question 7: A solid glass cylinder has a radius of 1.5cm and a height of 7.2cm
The density of the glass is 2.61g/cm^3
Work out the mass of the cylinder.



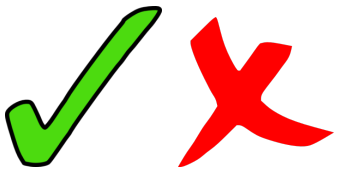
Question 8: The diagram shows a solid cylinder.
The cylinder has radius of 2y and height of 6y.
The cylinder is melted down and made into a sphere of radius r.

Express r in terms of y.





Answers



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