

Name:

## Exam Style Questions

# Surface Area of a Cylinder



Corbettmaths

Equipment needed: Calculator, pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

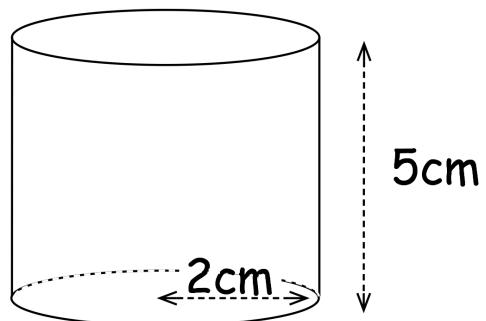


Video 315

Answers and Video Solutions



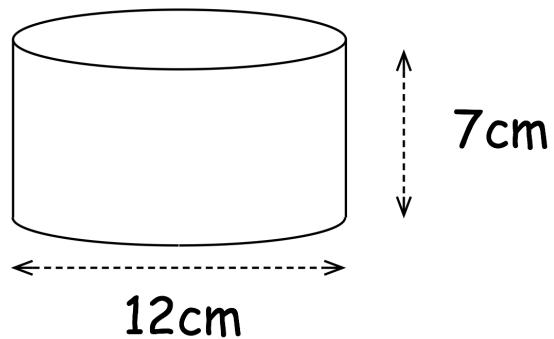
1. Below is a cylinder with radius 2cm and height 5cm.



Calculate the surface area of the cylinder.

.....cm<sup>2</sup>  
(3)

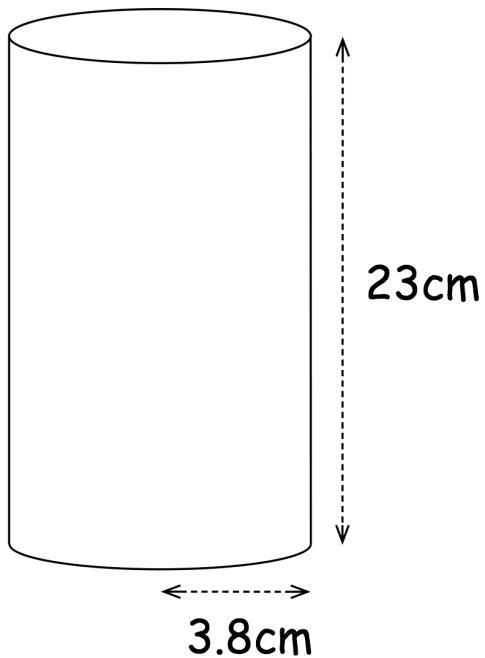
2. Shown below is a cylinder.



Calculate the curved surface area.  
Give your answer to 1 decimal place.

.....cm<sup>2</sup>  
(2)

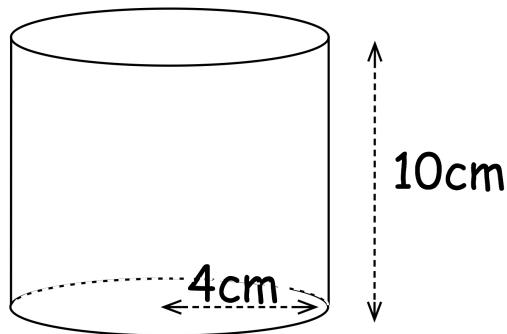
3. A cylindrical container is used to store crisps.  
The radius of the container is 3.8cm and the height is 23cm.



Calculate the surface area of the container.

.....cm<sup>2</sup>  
**(3)**

4. Shown below is a cylinder.

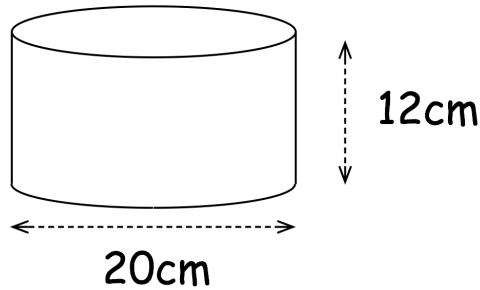


Work out the surface area of the cylinder.  
Give your answer in terms of  $\pi$

..... $\text{cm}^2$   
(3)

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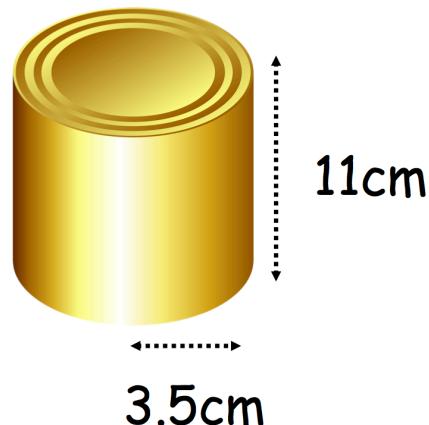
5. Shown below is a cylinder.



Work out the surface area of the cylinder.  
Give your answer in terms of  $\pi$

..... $\text{cm}^2$   
(3)

6. A can of baked beans will have a paper label wrapped around the outside.



The can has a height of 11cm and a radius of 3.5cm.

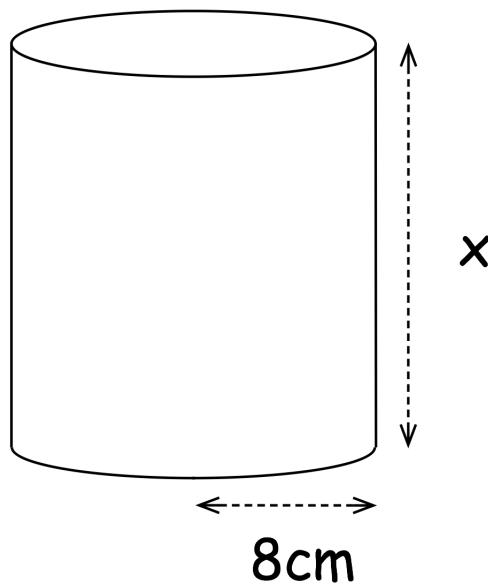
The label will cover the entire height of the can.

The label will have a 1cm overlap vertically so that it can be stuck together.

Calculate the area of the label.

..... $\text{cm}^2$   
**(4)**

7. A cylinder has a radius of 8cm.

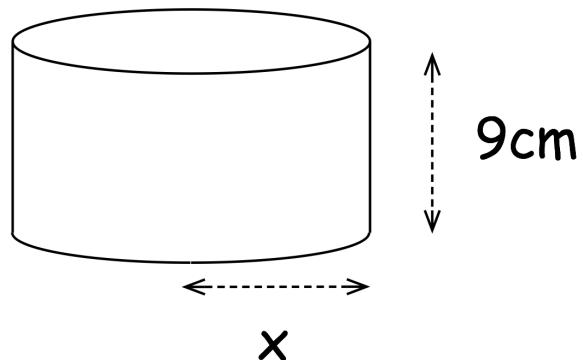


The surface area of the cylinder is  $1200\text{cm}^2$

Work out the height of the cylinder, x.

.....cm  
(3)

8. Shown below is a cylinder with a height of 9cm.

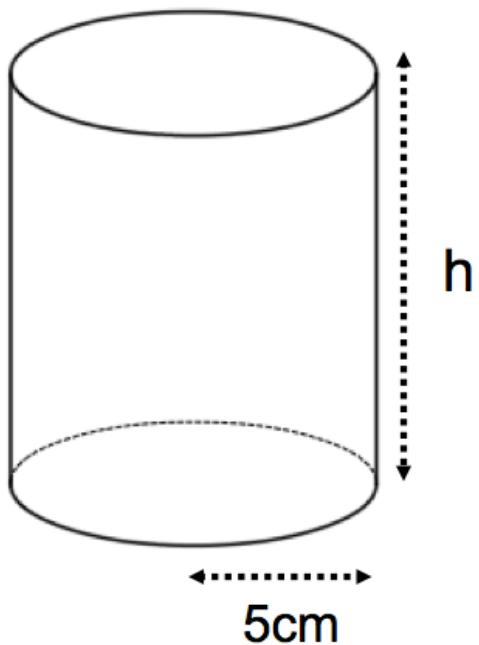


The surface area of the cylinder is  $180\pi \text{ cm}^2$

Work out the radius of the cylinder, x.

.....cm  
(3)

9.



The surface area of the cylinder is  $170\pi \text{ cm}^2$ .

Calculate the height of the cylinder.

.....cm  
(3)

10. On a farm, there is a grain silo.

 The silo is cylindrical with a tile roof.

The silo has a diameter of 8 metres and is 6 metres tall.

The farmer wants to paint the curved surface of the silo.

Each can of paint will cover  $20\text{m}^2$ .

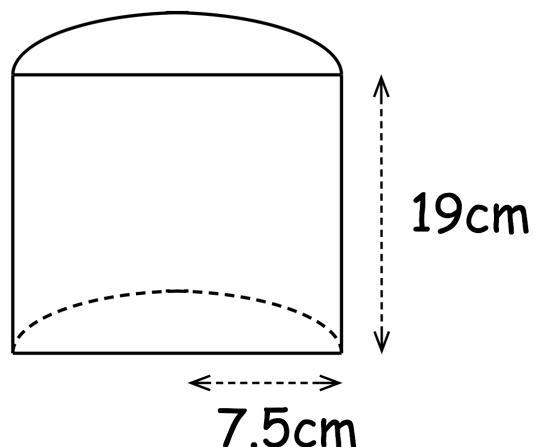
The paint costs £11.75 per can.

How much will it cost the farmer to paint the silo?

£.....

**(4)**

11. Shown below is a semicylinder.



Work out the surface area of the semicylinder.

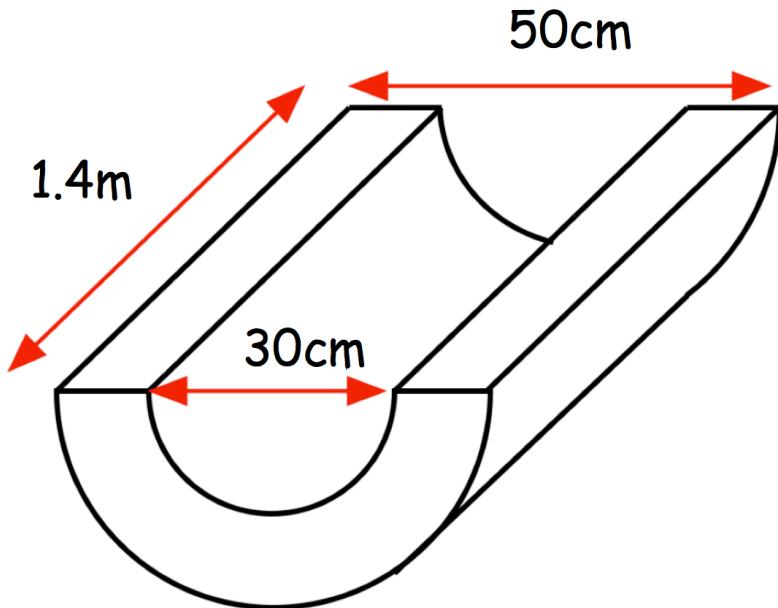
..... $\text{cm}^2$   
(4)

12. Fleur is creating a piece of equipment for a soft play.



She starts with a cylindrical piece of foam, diameter 50cm and length 1.4m. From the centre of the cylinder, Fleur removes a cylinder with diameter 30cm. Finally she removes the top half of the foam.

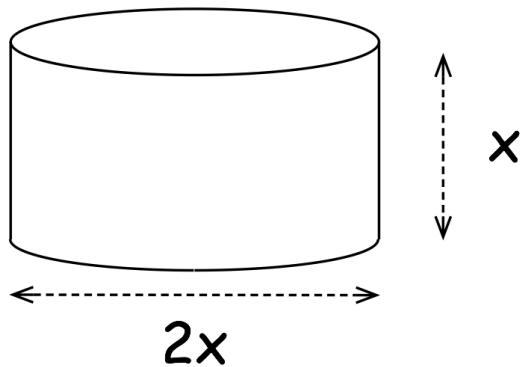
The diagram below shows the piece of equipment.



Work out the surface area of the piece of equipment.

.....  $\text{cm}^2$   
(5)

13.



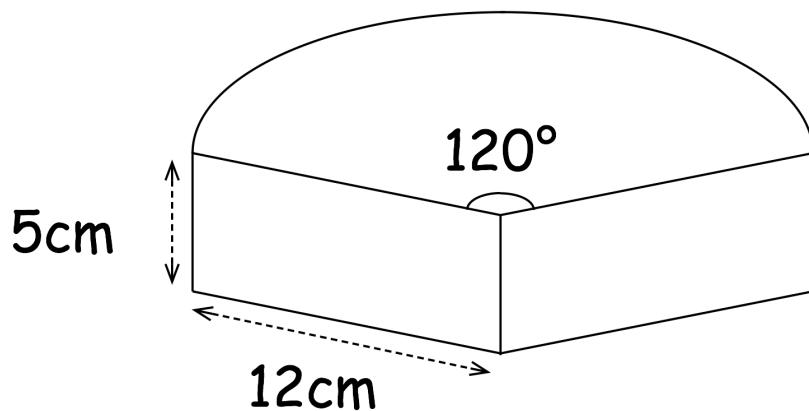
The cylinder above has surface area  $400\pi \text{ cm}^2$

Calculate x.

.....cm  
(4)

14. A mobile pizza van sells slices of pizza.

The box they use is shown below.



The box has a height of 5cm.

The cross-section of the box is a sector, radius 12cm and angle 120°

Find the surface area of the box.

.....cm<sup>2</sup>

(6)