

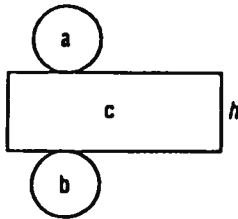
Name _____

8.9 Surface Area and Volume of a Cylinder

MATHPOWER™ *Eight*, pp. 288–289



$$\begin{aligned} \text{Volume} &= \text{area of base} \times \text{height} \\ &= \pi r^2 \times h \end{aligned}$$

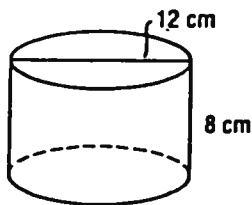


$$\begin{aligned} \text{Surface area} &= \text{areas of } a + b + c \\ &= \pi r^2 + \pi r^2 + (\pi d \times h) \end{aligned}$$

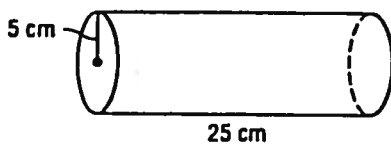
Use $\pi = 3.14$.

Calculate the surface area and the volume of each cylinder.

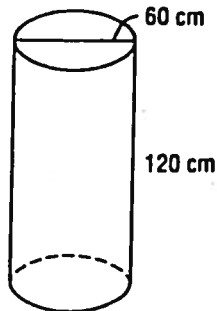
1.



2.



3.



4. A flour canister is 25 cm tall and has a diameter of 20 cm. It is filled to 3 cm from the top. What volume of flour does it contain?

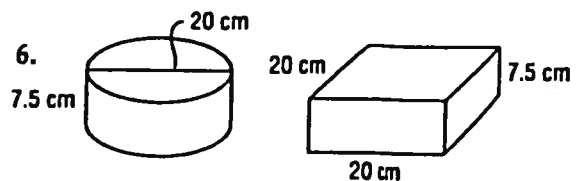
5. A juice can is 16 cm tall and has a diameter of 9 cm. The ends of the can are tin and the body is cardboard.

a) What is the volume of the can?

b) What area of tin is used?

c) What area of cardboard is used?

d) What is the total surface area?



6. a) Which shape has the greater surface area?

b) By how much is it greater?

c) Which shape has the greater volume?

d) By how much is it greater?
