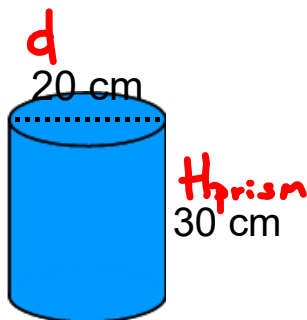


## Warm Up Grade 8



Find the VOLUME



$$d = 20 \text{ cm}$$

$$r = 10 \text{ cm}$$

$$H_{\text{prism}} = 30 \text{ cm}$$

$$\begin{aligned} A_0 &= \pi r^2 \\ &= (3.14)(10 \text{ cm})^2 \\ &= (3.14)(100 \text{ cm}^2) \\ &= 314 \text{ cm}^2 \end{aligned}$$

$$\begin{aligned} \text{Vol} &= A_{\text{base}} \times H \\ &= 314 \text{ cm}^2 \times 30 \text{ cm} \\ &= 9420 \text{ cm}^3 \end{aligned}$$

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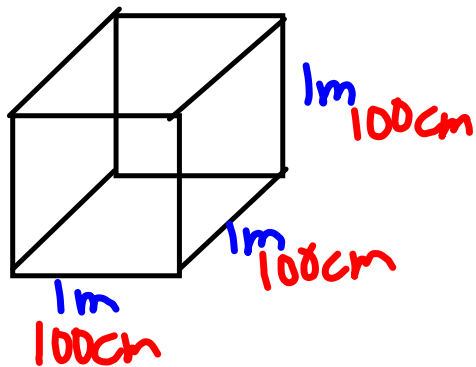
1. Volume of can  $452 \text{ cm}^3$   
 Contents of can  $398 \text{ ml}$

Why the difference?

The can is never filled to the top with beans, and that is why the amount of beans is less than the actual volume.

2. The radius was changed to  $m$  because the height was in  $m$ .

$$\text{Volume } 46 \text{ m}^3 = \underline{\hspace{2cm}} \text{ cm}^3$$



$$\begin{aligned} V &= l \times w \times h \\ &= 1 \times 1 \times 1 \\ &= 1 \text{ m}^3 \end{aligned}$$

$$\begin{aligned} \text{Vol} &= l \times w \times h \\ &= 100 \times 100 \times 100 \\ &= 1\,000\,000 \text{ cm}^3 \end{aligned}$$

$$\begin{aligned} 1 \text{ m}^3 &= 1\,000\,000 \text{ cm}^3 \\ 46 \text{ m}^3 &= 46\,000\,000 \text{ cm}^3 \end{aligned}$$

3. The number for  $\text{cm}^3$  is very large

$$4a) \text{ Vol} = A_b \times h \\ = 78.5 \times 10 \\ = 785 \text{ cm}^3$$

$$b) \text{ Vol} = A_b \times h \\ = 12.6 \times 5 \\ = 63 \text{ cm}^3$$

$$6.3 \times 10$$

$$c) \text{ Vol} = A_b \times h \\ = 201.1 \times 8 \\ = 1608.8 \text{ cm}^3$$

$$5. A_b = \pi r^2 \\ = 3.14 \times 4^2 \\ = 3.14 \times 16 \\ = 50.24 \text{ cm}^2$$

$$\text{Vol} = A_b \times h \\ = 50.24 \times 10 \\ = 502.4 \text{ cm}^3$$

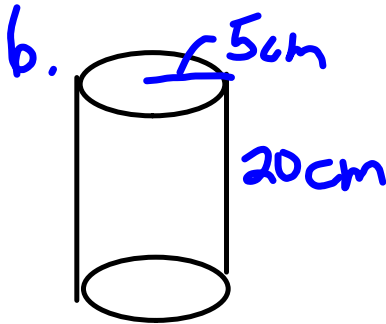
$$b) \text{ Vol} = A_b \times h \\ = 176.625 \times 50 \\ = 8831.25 \text{ cm}^3$$

$$d=15 \\ r=7.5$$

$$A_b = \pi r^2 \\ = 3.14 \times 7.5^2 \\ = 3.14 \times 56.25 \\ = 176.625 \text{ cm}^2$$

$$c) A_b = \pi r^2 \\ = 3.14 \times 2.9^2 \\ = 3.14 \times 8.41 \\ = 26.4074 \text{ cm}^2$$

$$\text{Vol} = A_b \times h \\ = 26.4074 \times 12.4 \\ = 327.45 \text{ cm}^3$$



$$\begin{aligned}
 A_b &= \pi r^2 \\
 &= 3.14 \times 5^2 \\
 &= 3.14 \times 25 \\
 &= 78.5 \text{ cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Vol} &= A_b \times h \\
 &= 78.5 \times 20 \\
 &= 1570 \text{ cm}^3
 \end{aligned}$$

1570 cm<sup>3</sup> of wax needed.

8.

$$\begin{aligned}
 d &= 10 \text{ cm} \\
 r &= 5 \text{ cm}
 \end{aligned}$$

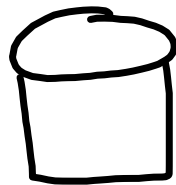
$$\begin{aligned}
 A_b &= \pi r^2 \\
 &= 3.14 \times 5^2 \\
 &= 3.14 \times 25 \\
 &= 78.5 \text{ cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Vol} &= A_b \times h \\
 &= 78.5 \times 2.5 \\
 &= 196.25 \text{ cm}^3
 \end{aligned}$$

196.25 cm<sup>3</sup> of rubber needed for the hockey puck

# Class/Homework

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300mm → 30cm

#9, #11, #12, #13, #14, #15

May 24

Test \_\_\_\_\_ Remember

or

May 28 → Tuesday