

Prism

# Shape Sort

Place the correct name by each 3D shape.

Cylinder

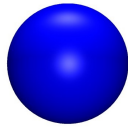
Prism

Prism

Cylinder

Other

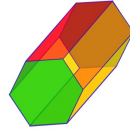
Other



Other

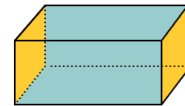


Prism

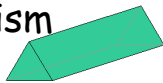


Cylinder

Prism



Prism



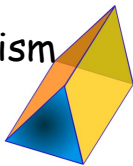
Prism



Other



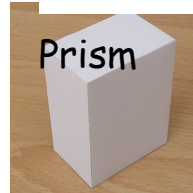
Prism



Cylinder



Prism



Other



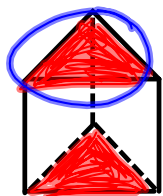
## 5.5 Volume of a Prism and Cylinder

### What is a prism?

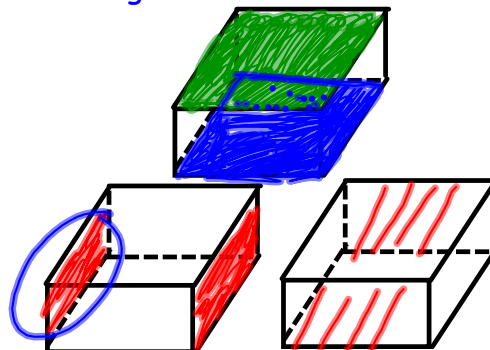
- A solid object (3D).
- Two identical ends. *(base)*
- All flat sides.
- The shape of the ends give the prism its name.

### What is a cylinder?

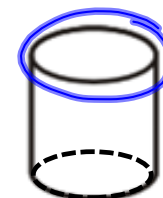
- A solid object (3D).
- Two identical ends that are circles.
- One curved side. *(rectangle)*



Triangular Prism

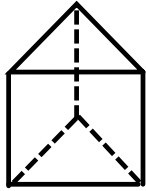


Rectangular Prism

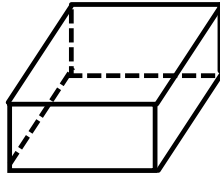


Cylinder

\* Using the 10 marbles provided, determine the number of marbles that can fill the following shapes:



Triangular Prism



Rectangular Prism



Cylinder

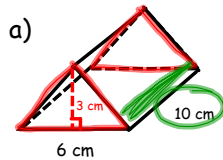


[Volume of a Prism Video](#)



Units for a volume question will always have an exponent of 3

Ex. 1: Find the volume of each figure.



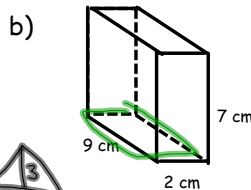
**Triangular Prism**

$$V = A \text{ of } B \times H$$

$$= \frac{bh}{2} \times H$$

$$= \frac{6(3)}{2} \times 10$$

$$= 90 \text{ cm}^3$$

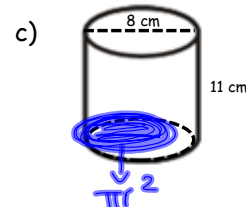


$$V = A \text{ of } B \times \text{Height}$$

$$= l \times w \times H$$

$$= 9 \times 2 \times 7$$

$$= 126 \text{ cm}^3$$



$$V = A \text{ of } B \times \text{Height}$$

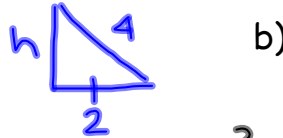
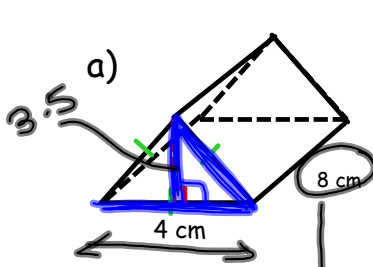
$$= \pi r^2 \times H$$

$$= \pi (4)^2 \times 11$$

$$= 552.64 \text{ cm}^3$$

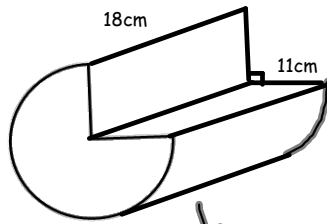
Ex. 2: (Tougher questions) Find the volume.

See page 24, #10, for a beer diagram !



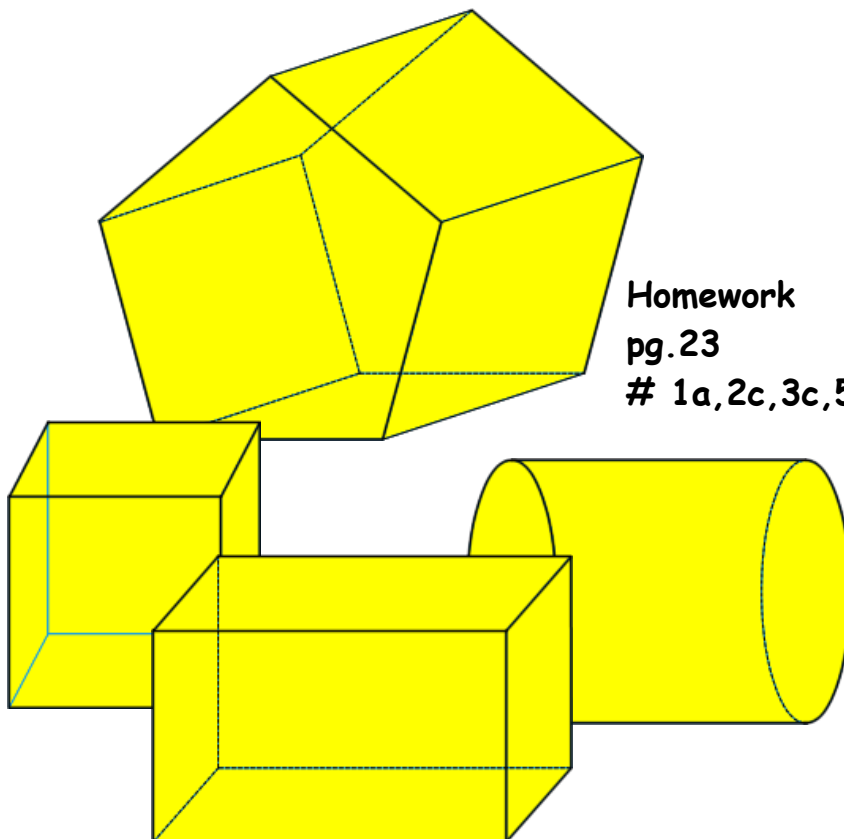
$$\begin{aligned}
 a^2 + b^2 &= c^2 \\
 2^2 + h^2 &= 4^2 \\
 4 + h^2 &= 16 \\
 4 - 4 + h^2 &= 16 - 4 \\
 h^2 &= 12 \\
 h &= \sqrt{12}
 \end{aligned}$$

$$\begin{aligned}
 V &= \text{Area of Base} \times \text{Height} \\
 &= \frac{bh}{2} \times \text{Height} \\
 &= \frac{4(3.5)}{2} \times 8 \\
 &= 56 \text{ cm}^3
 \end{aligned}$$



$$\begin{aligned}
 &\text{Cylinder} \times 0.75 \\
 &= 6842 \times 0.75 \\
 &= 5129 \text{ cm}^3
 \end{aligned}$$

$$\begin{aligned}
 &\pi r^2 h \\
 &\pi (11)^2 (18)
 \end{aligned}$$



Homework  
pg. 23  
# 1a, 2c, 3c, 5, 6a, 7b