

Calculating Volume: Pyramids

A **triangular pyramid** has a **triangle base** with a base of 6 cm and a height of 4 cm. The pyramid's height is 9 cm.

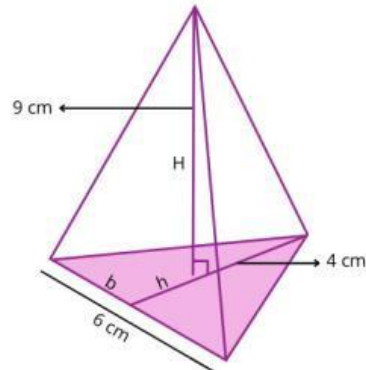
What is its volume?

First, we need to know the **Base Area**:

$$\begin{aligned} \text{BA} &= \frac{b \times h}{2} \\ &= \frac{6 \times 4}{2} \\ &= \frac{24}{2} \\ &= 12 \text{ cm}^2 \end{aligned}$$

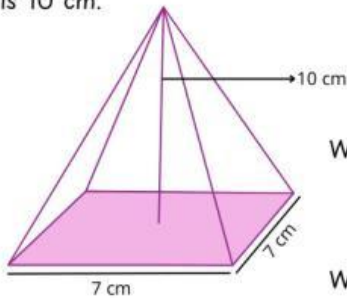
Now, the **second** step: calculate the **Volume** using the base area.

$$\begin{aligned} V &= \frac{\text{BA} \times H}{3} \\ &= \frac{12 \times 9}{3} \\ &= \frac{108}{3} \\ &= 36 \text{ cm}^3 \end{aligned}$$



Now, it's your turn. **Calculate** both the **base area** and the **volume** of the pyramids below.

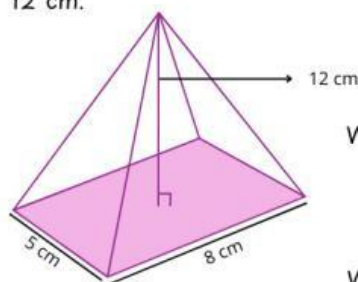
A **quadrangular pyramid** has a **square base** with sides measuring 7 cm each. The height of the pyramid is 10 cm.



What is its base area?

What is its volume?

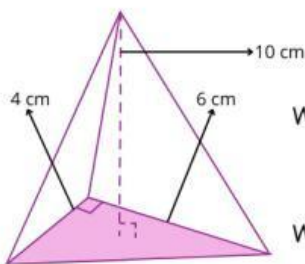
A **rectangular pyramid** has a base with a length of 8 cm and a width of 5 cm. The height of the pyramid is 12 cm.



What is its base area?

What is its volume?

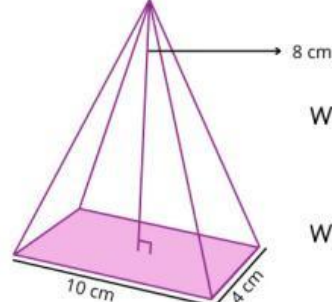
A **triangular pyramid** has a base triangle with a base of 6 cm and a height of 4 cm. The height of the pyramid is 9 cm.



What is its base area?

What is its volume?

A **rectangular pyramid** has a base measuring 10 cm in length and 4 cm in width. The height of the pyramid is 8 cm.



What is its base area?

What is its volume?