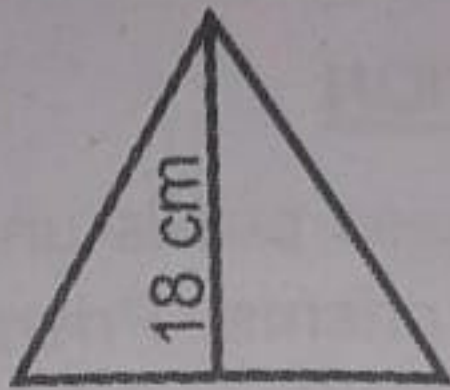
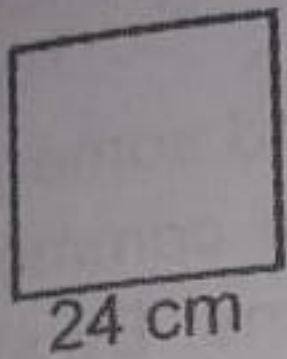


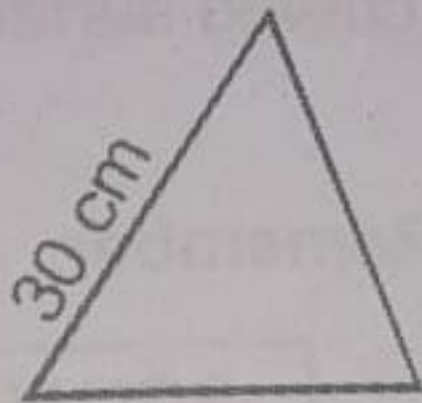
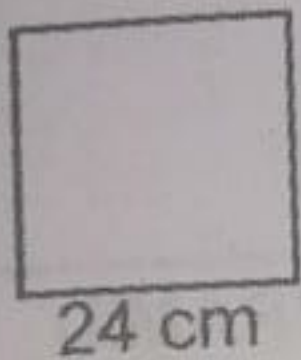
Qn. 1


A square pyramid is made using a square and four triangles with dimensions as shown below.



What would be the height of the pyramid?

What if the square and triangle are like these?



 Base edge = 24 cm  
Slant height = 18 cm

$$\begin{aligned} \text{height} &= \sqrt{18^2 - 12^2} \\ &= \sqrt{180} = \sqrt{36 \times 5} = 6\sqrt{5} \text{ cm} \end{aligned}$$

Second figure,

Base Edge = 24 cm

Lateral edge = 30 cm

$$\begin{aligned} \text{Slant height} &= \sqrt{30^2 - 12^2} \\ &= \sqrt{(30 + 12)(30 - 12)} \\ &= \sqrt{42 \times 18} = \sqrt{2 \times 36} = 6\sqrt{21} \end{aligned}$$

$$\begin{aligned} \text{Height} &= \sqrt{(6\sqrt{21})^2 - 12^2} \\ &= \sqrt{756 - 144} = \sqrt{612} \\ &= \sqrt{36 \times 17} \\ &= 6\sqrt{17} \text{ cm} \end{aligned}$$