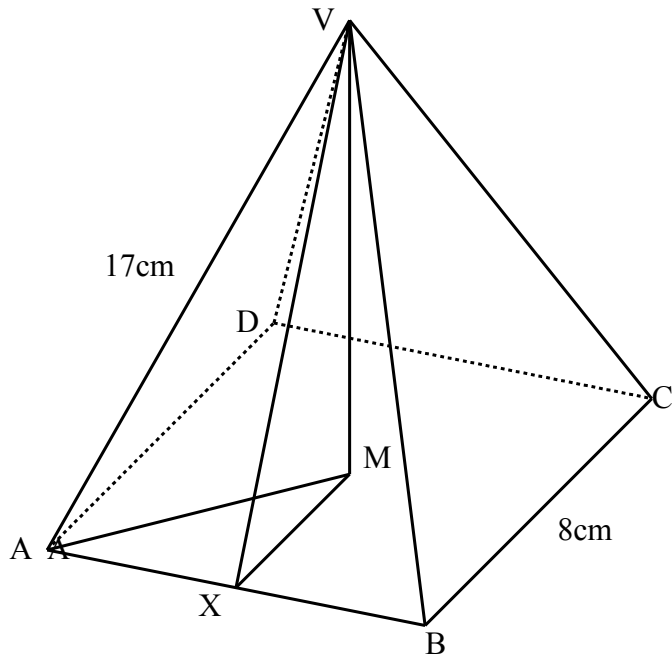


Using Pythagoras in 3D Shapes

Example



The diagram above shows a square-based pyramid. Find the perpendicular height VM of the pyramid.

$$AX = 4\text{cm and } XM = 4\text{cm}$$

Triangle AXM is right-angled at X

$$\text{So } AM^2 = 4^2 + 4^2 = 32$$

$$\text{So } AM = \sqrt{32}$$

Triangle AVM is right-angled at M

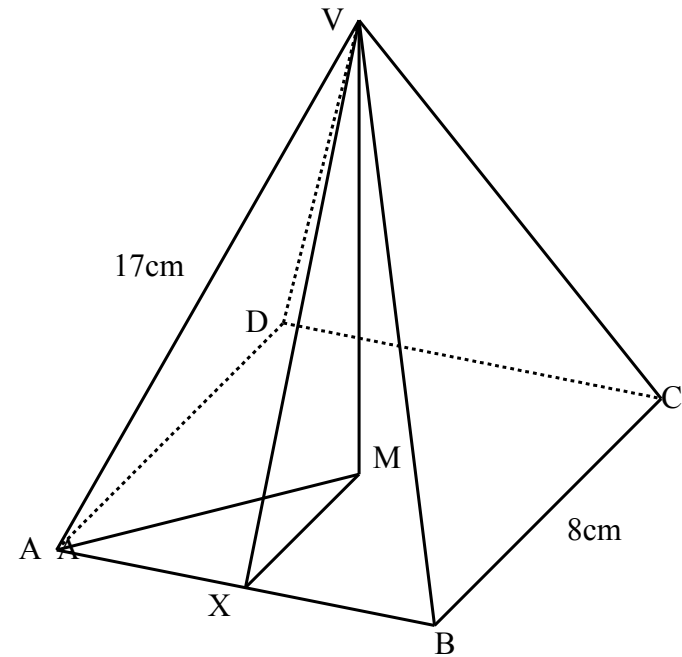
$$\text{So } VM^2 = 17^2 - (\sqrt{32})^2$$

$$VM^2 = 255$$

$$VM = 15.97\text{cm (to 2dp)}$$

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