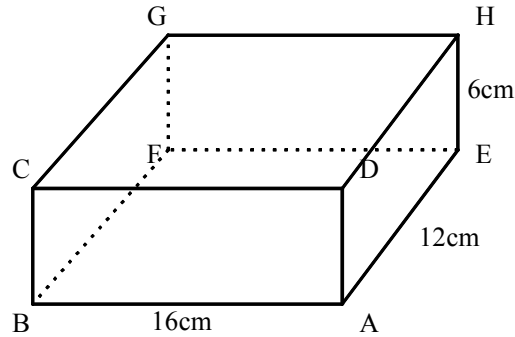
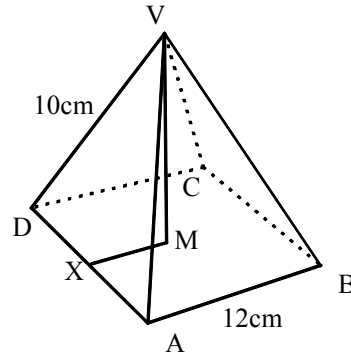


Three Dimensional Pythagoras Questions

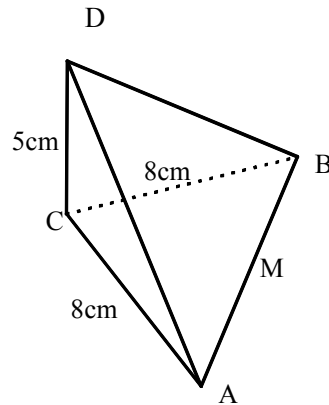
- 1) The diagram shows a cuboid.
- (a) Draw the triangle ABE, marking the right angle and the lengths which are known. Use your triangle to find the length of BE
- (b) Draw the triangle BEH, marking the right angle and the lengths which are known. Use your triangle to find the length of BH.



- 2) ABCDV is a square-based pyramid. $AB=12\text{cm}$ and $DV=10\text{cm}$. M is the midpoint of the square base and X is the midpoint of AD.
- State clearly which triangle you are using for each part, and show your working.
- (a) Find the length of DM.
- (b) Find the length of VM.
- (c) Use triangle VXD to find the length of VX.
- (d) Draw the triangle VXM, marking the right angle and all the lengths. Check that Pythagoras' Theorem works in this triangle.

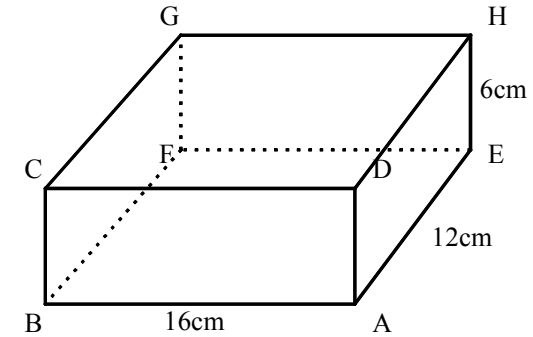


- 3) In the diagram, all the angles at C are right angles, and ACB and ADB are isosceles triangles. $AC=BC=8\text{cm}$, and $CD=5\text{cm}$. M is the midpoint of AB. Using a suitable right angled triangle in each case,
- (a) Find the distance AB.
- (b) Find the distance CM
- (c) Find the distance DM

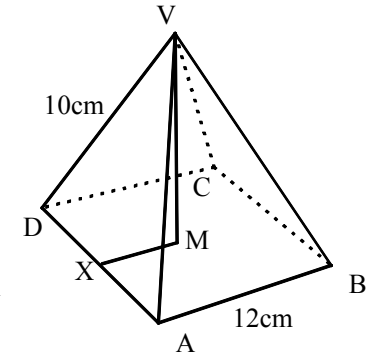


Three Dimensional Pythagoras Questions

- 1) The diagram shows a cuboid.
- (a) Draw the triangle ABE, marking the right angle and the lengths which are known. Use your triangle to find the length of BE
- (b) Draw the triangle BEH, marking the right angle and the lengths which are known. Use your triangle to find the length of BH.



- 2) ABCDV is a square-based pyramid. $AB=12\text{cm}$ and $DV=10\text{cm}$. M is the midpoint of the square base and X is the midpoint of AD.
- State clearly which triangle you are using for each part, and show your working.
- (a) Find the length of DM.
- (b) Find the length of VM.
- (c) Use triangle VXD to find the length of VX.
- (d) Draw the triangle VXM, marking the right angle and all the lengths. Check that Pythagoras' Theorem works in this triangle.



- 3) In the diagram, all the angles at C are right angles, and ACB and ADB are isosceles triangles. $AC=BC=8\text{cm}$, and $CD=5\text{cm}$. M is the midpoint of AB. Using a suitable right angled triangle in each case,
- (a) Find the distance AB.
- (b) Find the distance CM
- (c) Find the distance DM

