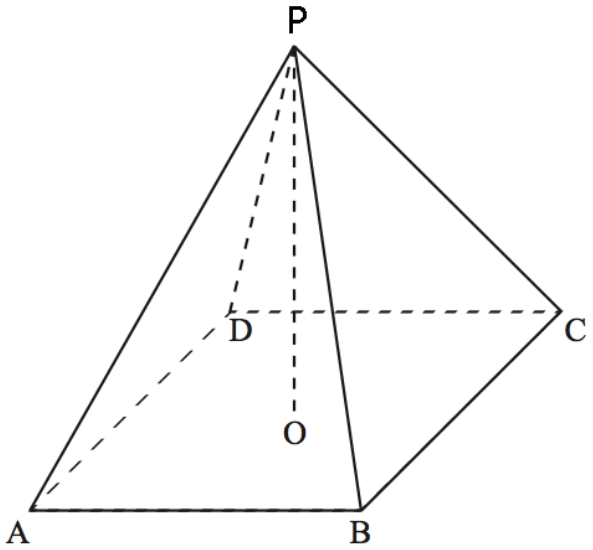
1 ABCDP is a pyramid with a square base of side 6.5 cm and a vertical height, OP, of 5.2 cm.



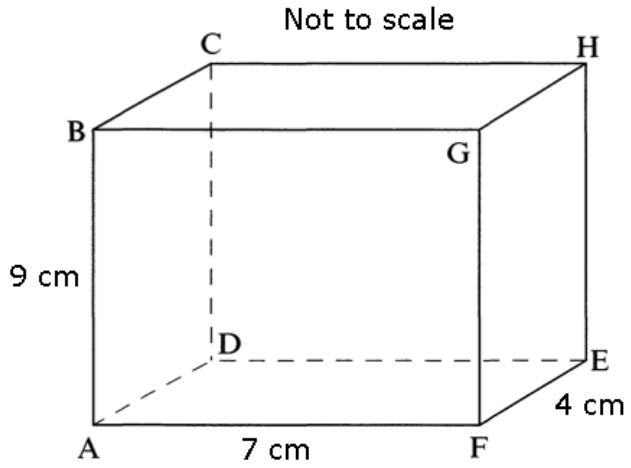
a) Show that the length AP is 6.94 cm correct to 3 significant figures.

b) Calculate the angle APB.

c) Hence, find the area of the triangle APB.

d) Calculate the total surface area of the pyramid.

2 The diagram opposite shows a cuboid with a length of 7 cm, a width of 4 cm and a height of 9 cm.

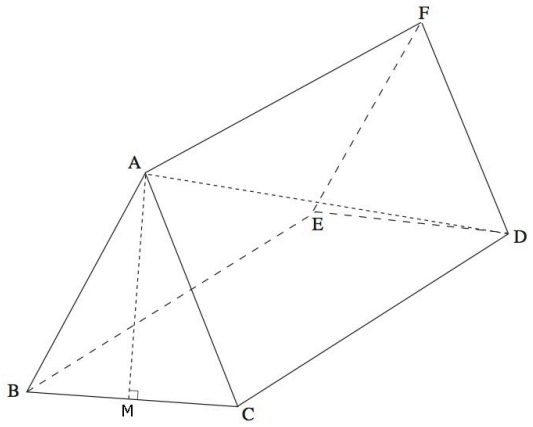


a) Calculate the length AE.

b) Calculate the length of CF.

c) Find the size of the angle AHE.

3 The diagram opposite shows an isosceles pyramid, with a perpendicular height, AM, 6 cm, AC=9 cm and a length, CD, 15 cm.



a) Show that the base of the triangle BC is 13.4 cm correct to 3 significant figures.

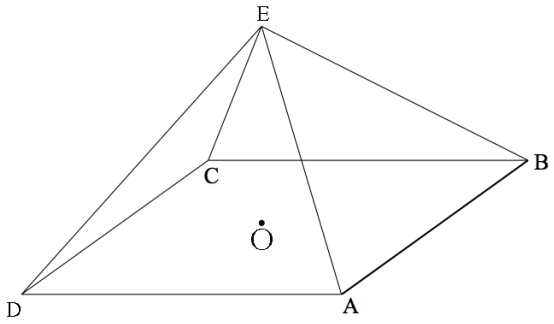
b) Calculate the length of BD.

c) Calculate the length DM.

d) Calculate the length AD.

e) Find the size of the angle MAD.

4 The diagram opposite shows a square based pyramid with O at the centre of the base.
AB=7 cm and the slant AE=10 cm.



a) Find AC.

b) Calculate the perpendicular height, OE, of the pyramid.

c) M is placed exactly half way between A and B. Find the length EM.

d) Hence find the area of the triangle AEB.

e) Find the size of the angle made between the triangle AEB and the square base of the pyramid.

Answers

1 b) 55.8^o

c) $19.9\ cm^2$

d) $122\ cm^2$

2 a) 8.06 cm

b) 12.1 cm

c) 41.8^o

3 b) $20.1\ cm^2$

c) 17.5 cm

d) 16.4 cm

e) 70^o

4 a) 9.9 cm

b) 8.69 cm

c) 9.37 cm

d) $32.8\ cm^2$

e) 60.3^o