2

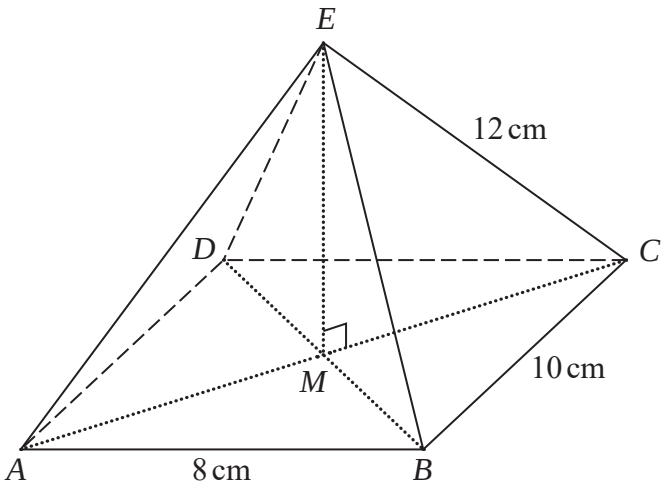

Diagram **NOT** accurately drawn

Figure 1

Figure 1 shows a right pyramid *ABCDE* with horizontal rectangular base *ABCD* and vertex *E*.

$AB = 8\,\text{cm}$ $BC = 10\,\text{cm}$ $EA = EB = EC = ED = 12\,\text{cm}$

M is the midpoint of the base.

(a) Calculate the **total** surface area, in cm^2 to 3 significant figures, of the pyramid.

(4)

The point *P* is the midpoint of *AB* and the point *Q* is the midpoint of *BC*.

(b) Calculate the size, in degrees to one decimal place, of $\angle PEQ$.

(4)

$\left[\text{Cosine rule: } a^2 = b^2 + c^2 - 2bc\cos A\right]$

Question 2 continued

(Total for Question 2 is 8 marks)