**4**

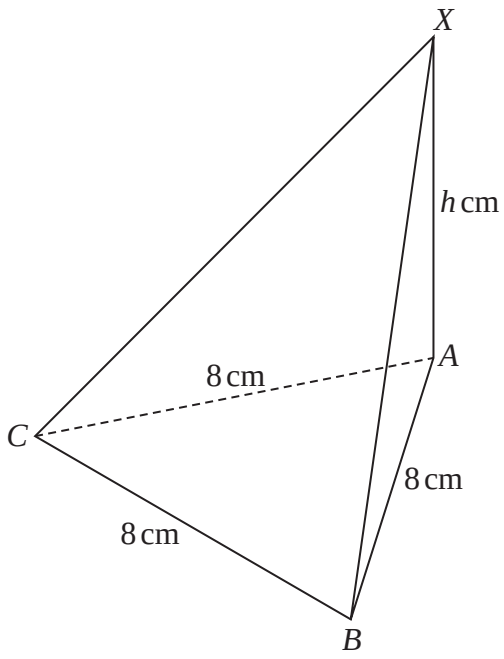


Diagram **NOT** accurately drawn

**Figure 3**

Figure 3 shows a triangular pyramid $ABCX$.
The base $ABC$ of the pyramid is an equilateral triangle where $AB = BC = CA = 8$ cm.
The vertex $X$ of the pyramid is such that $AX$ is perpendicular to the base of the pyramid and $AX = h$ cm.

The volume of the pyramid is $48\sqrt{3}$ cm$^3$

(a) Show that $h = 9$

**(3)**

(b) Find, in degrees to one decimal place, the size of angle $BXC$.

**(3)**

(c) Find, in degrees to one decimal place, the size of the angle between the plane $BCX$ and the base $ABC$ of the pyramid.

**(3)**

**Question 4 continued**

**Question 4 continued**

**Question 4 continued**

**(Total for Question 4 is 9 marks)**