3

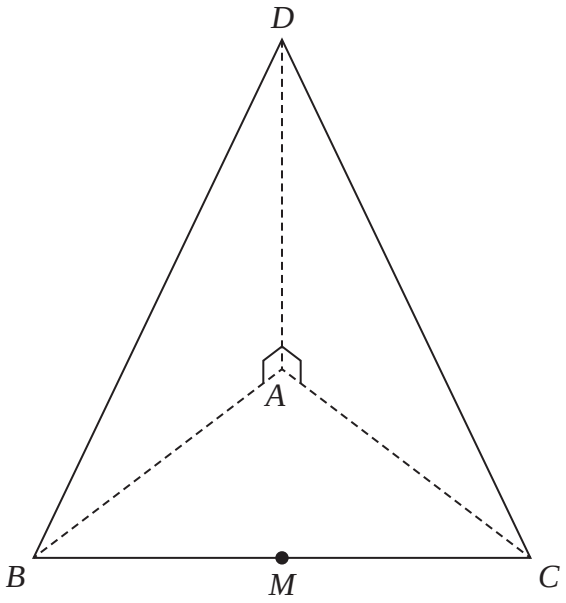

Diagram **NOT** accurately drawn

Figure 1

Figure 1 shows a triangular pyramid $ABCD$.

The base, ABC, of the pyramid is a horizontal isosceles triangle with $AB = AC = 10$ cm and $BC = 16$ cm. The midpoint of BC is M.

The face BCD of the pyramid is an isosceles triangle with $BD = CD = 26$ cm and D is vertically above A.

$\angle BAD = \angle CAD = 90°$

(a) Calculate the length, in cm, of AM.

(2)

Calculate, in degrees to the nearest degree,

(b) the size of $\angle BCD$,

(3)

(c) the size of the angle between the planes BCA and BCD.

(4)

Question 3 continued

Question 3 continued

Question 3 continued

(Total for Question 3 is 9 marks)