

9

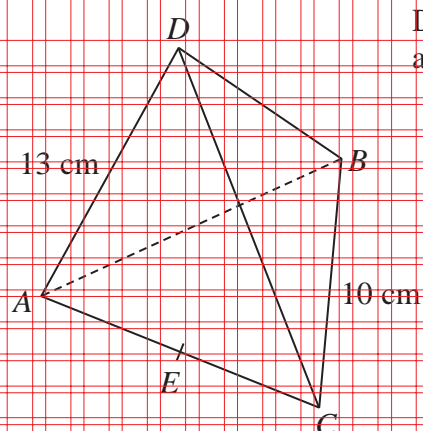
Diagram NOT
accurately drawn

Figure 2

Figure 2 shows a triangular pyramid $ABCD$.
 $AB = BC = CA = 10$ cm and $DA = DB = DC = 13$ cm.
 The point E is the midpoint of AC .

(a) Find the exact length of

(i) DE

(ii) BE

(4)

(b) Find, in degrees to 1 decimal place, the size of the angle between the line BD and the line DE .

(3)

(c) Find, in degrees to 1 decimal place, the size of the angle between the line BD and the plane ABC .

(3)

(d) Find, in degrees to 1 decimal place, the size of the angle between the plane ADC and the plane ABC .

(2)

(e) Find, in significant figures, the volume of the pyramid $ABCD$.

(5)



Question 9 continued

Example



P 4 4 0 3 0 A 0 2 5 3 2

Question 9 continued

PREPMT



Question 9 continued

Example

(Total for Question 9 is 15 marks)



P 4 4 0 3 0 A 0 2 7 3 2