

7

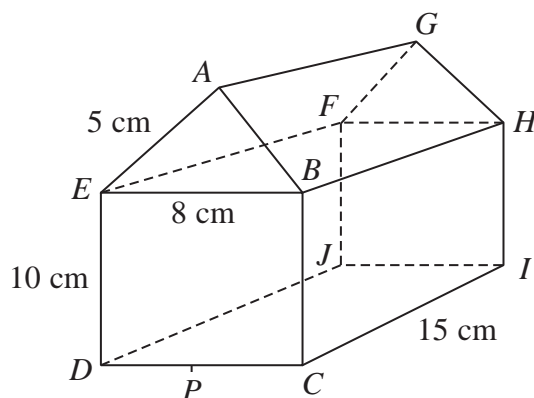


Diagram **NOT**
accurately drawn

Figure 3

Figure 3 shows a prism $ABCDEFGHJI$ which consists of a triangular prism $ABEFGH$ on top of a cuboid $BCDEFHIJ$.

$$AB = AE = 5 \text{ cm}, \quad EB = 8 \text{ cm}, \quad ED = 10 \text{ cm}, \quad CI = 15 \text{ cm}$$

P is the midpoint of DC .

Calculate, in cm to 3 significant figures,

(a) the length of PG , (3)

(b) the length of AC . (2)

Find, in degrees to the nearest 0.1° ,

(c) the size of the angle between PG and the plane $CDJI$, (3)

(d) the size of the angle between the plane $AGIC$ and the plane $CDJI$. (3)



Question 7 continued



(Total for Question 7 is 11 marks)

