Solution Book of Mathematic

Ssnior 2 Part I

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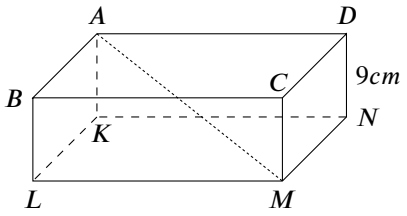
Written on 9 October 2022

Contents

1. The diagram below shows a cuboid with volume of $300cm^3$. Given that $AD = 2DC$ and $DN = 9cm$. Find the angle formed by line AM and plane $KLMN$.

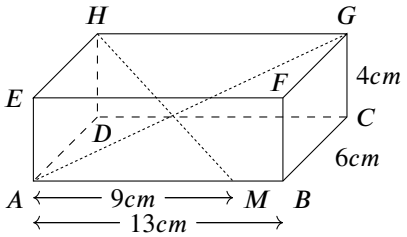


2. The diagram below shows a cuboid. Given that $AB = 13cm$, $BC = 6cm$, $CG = 4cm$. M is a point on AB, $AM = 9cm$. Find:

   (a) The angle formed by line HM and plane $ABCG$.

   (b) The angle formed by line HM and plane $HDAE$.

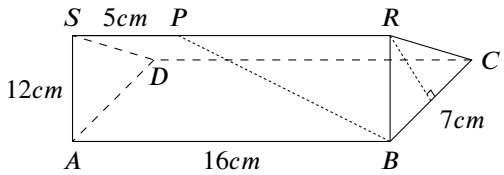
   (c) The angle formed by line AG and plane $CDHG$.



3. The diagram below shows a regular prism, its bases ADS and BCR are equiliteral triangles. Given that $AB = 16cm$, $BC = 7cm$, $SP = 5cm$. Find:

   (a) The length of BP.

   (b) The angle formed by line BP and plane $ABCD$.

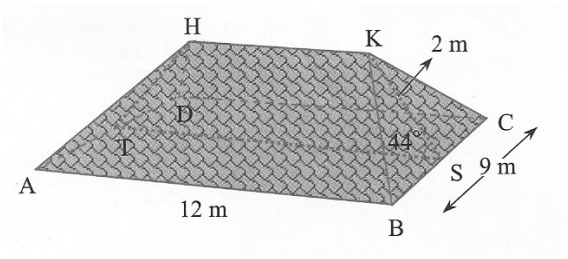


4. The diagram below shows a roof, HK is the ridge of the roof, its edges HA, HD, KB, KC are euqal in length. Both of the planes HAD and KBC form a 44^o angle with plane $ABCD$. Given that S and T are the midpoints of BC and AD respectively. Find:

   (a) The distance from line HK to plane $ABCD$.

   (b) The length of HK.

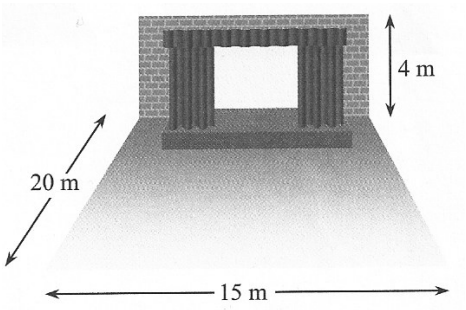
   (c) The angle formed by line HA and plane $ABCD$.



5. The length, width and height of a hall are $20m$, $15m$, and $4m$ respectively. Find:

   (a) The length of the diagonal of the hall.

   (b) The angle formed by the diagonal and the floor of the hall.



6. In the diagram below, $ABCD$ represents a rectangular plank with length and width of $60cm$ and $36cm$ respectively, its base BC is on the ground and the top of it lies on the wall. Assume that the distance between BC and the corner of the wall is $12cm$, find the angle formed by the diagonal BD of the plank and the ground.