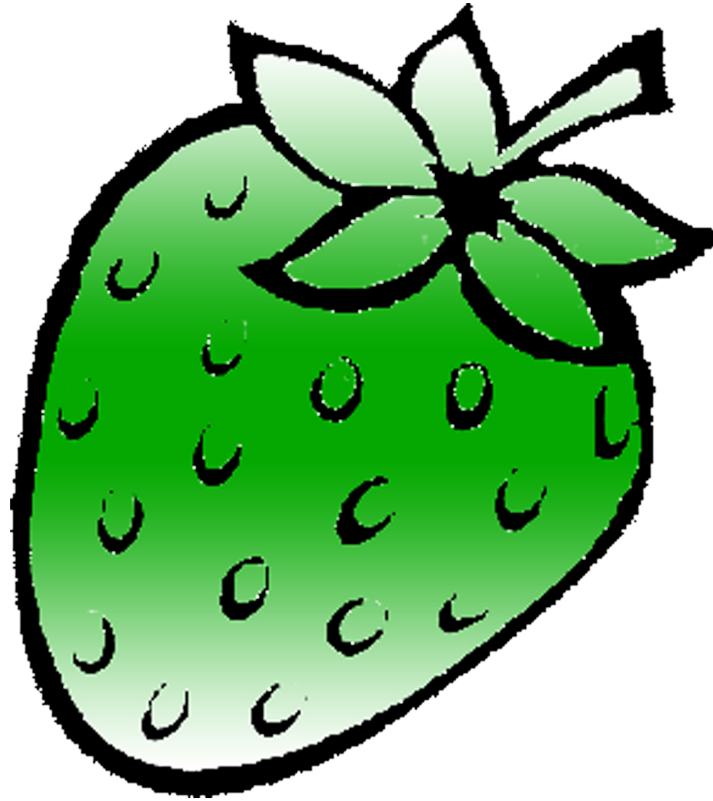


STRAWBERRY



/strawberrydevelopers



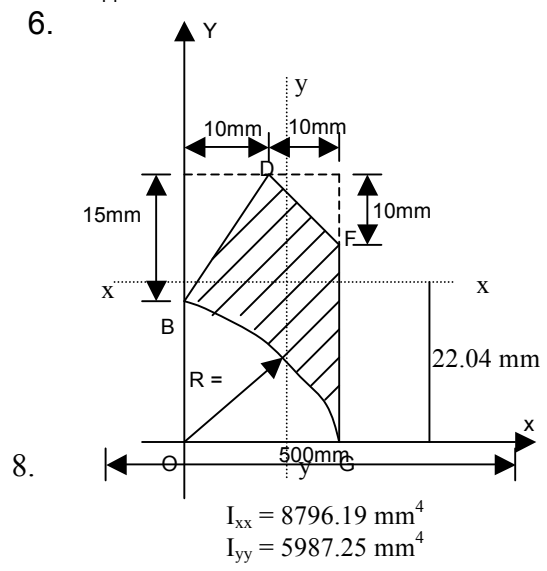
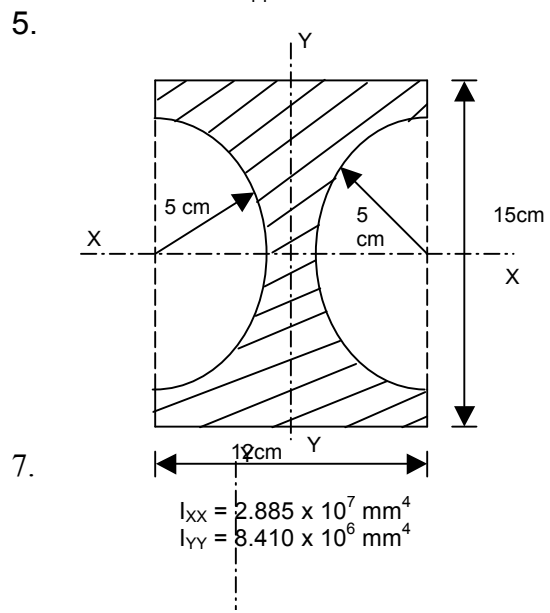
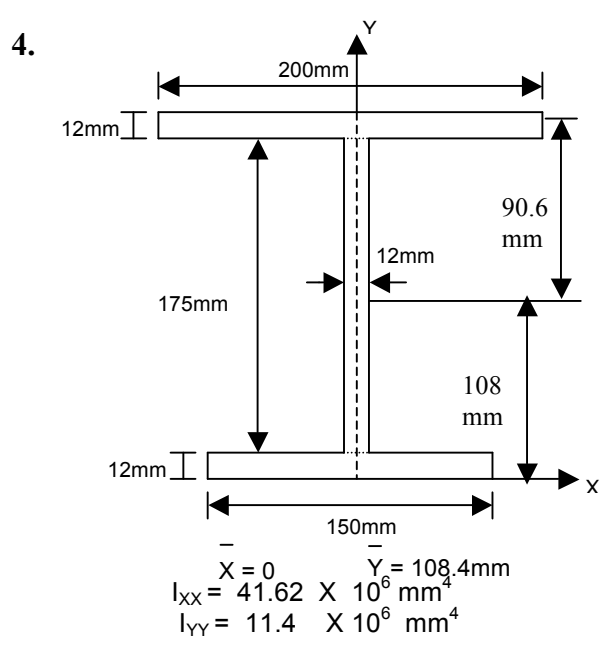
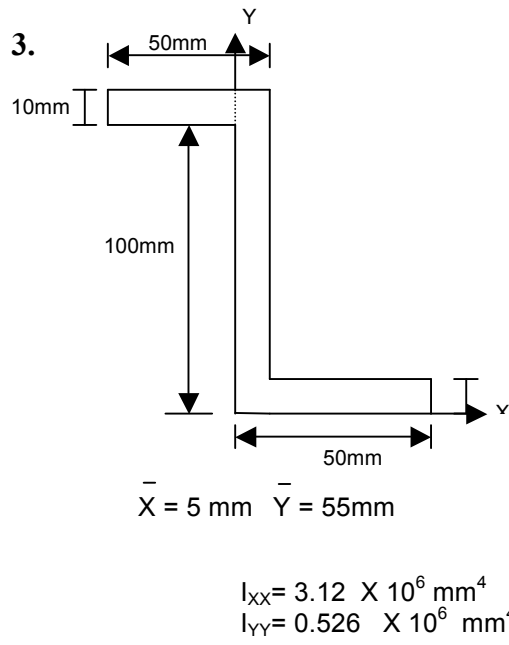
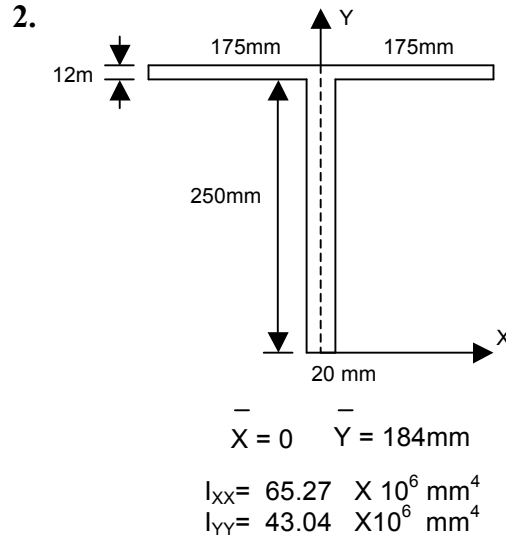
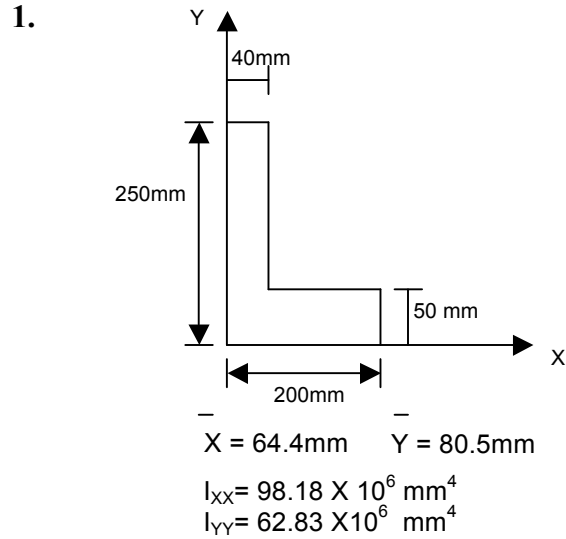
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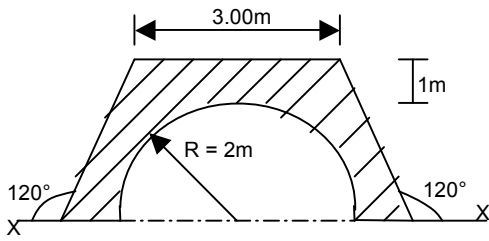
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MOMENT OF INERTIA

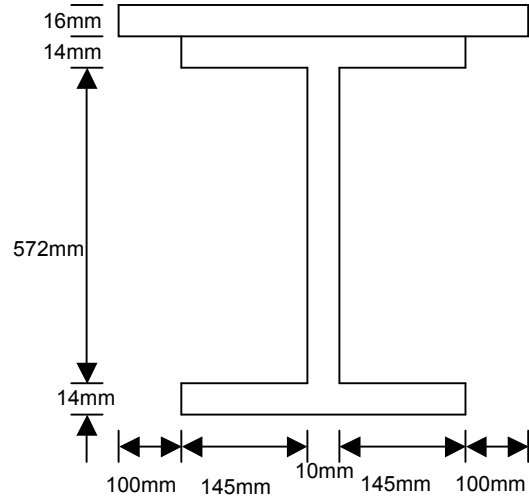
Find moment of inertia about centroidal axis



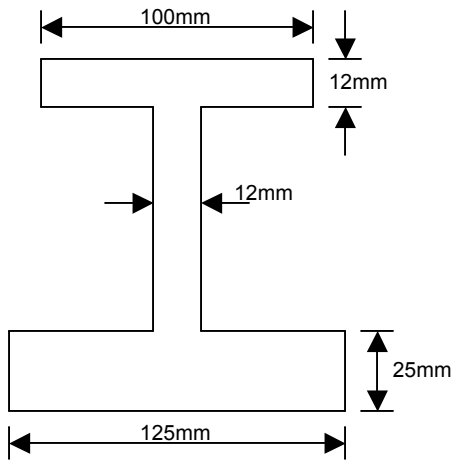


$$I_{XX} = 28.51 \text{ mm}^4$$

$$I_{YY} = 23.757 \text{ mm}^4$$



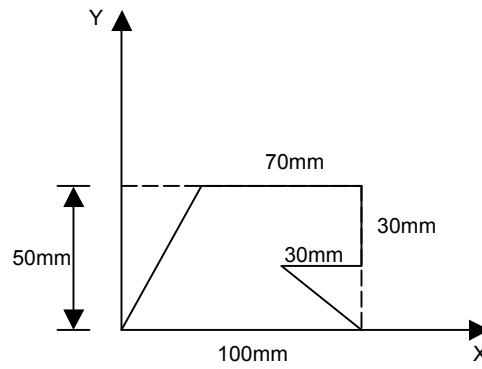
9. Find I_{xx} and I_{yy}



$$I_{XX} = 17.71 \times 10^6 \text{ mm}^4$$

$$I_{YY} = 5.09 \times 10^6 \text{ mm}^4$$

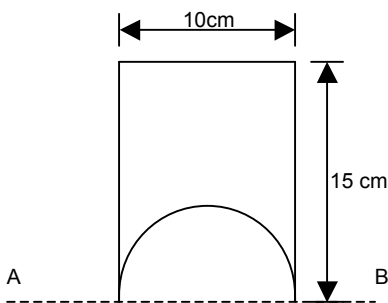
10. Find I_{xx} and I_{yy}



$$I_{XX} = 316.92 \times 10^4 \text{ mm}^4$$

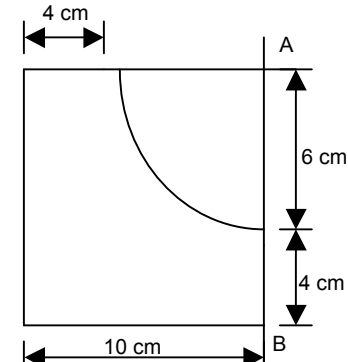
$$I_{YY} = 14.11 \times 10^6 \text{ mm}^4$$

11. Find I_{AB} .



$$I_{AB} = 11004.56 \text{ cm}^4$$

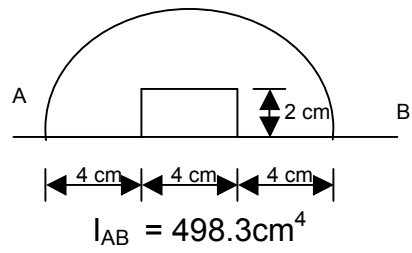
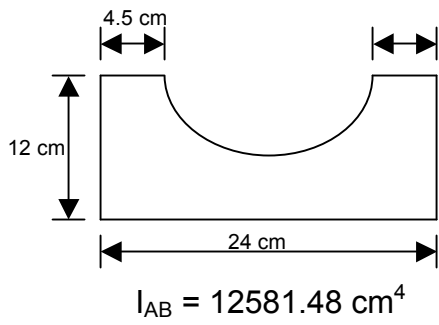
12. Find I_{AB}



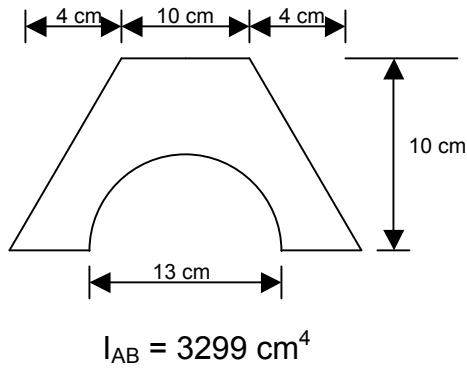
$$I_{AB} = 3078.86 \text{ cm}^4$$

13. Find I_{AB} .

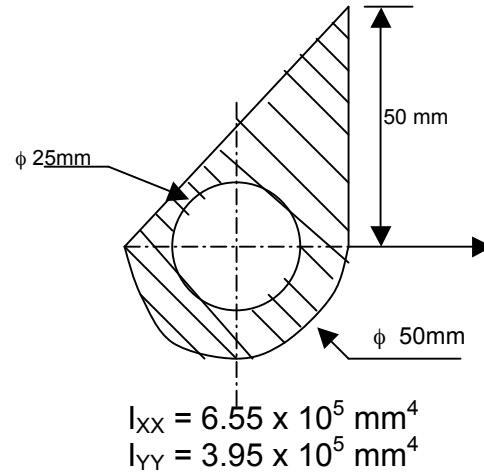
14. Find I_{AB} .



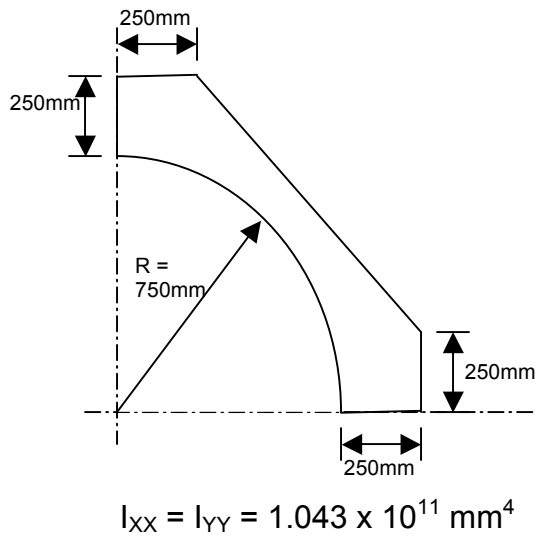
15. Find I_{AB} .



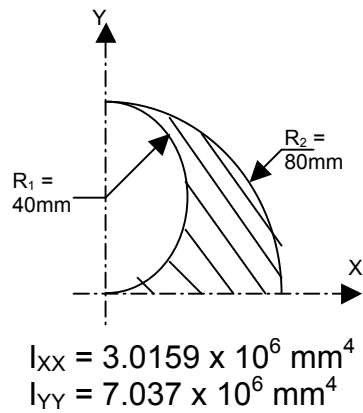
16. Find I_{xx} & I_{yy}



17. Find I_{xx} & I_{yy}

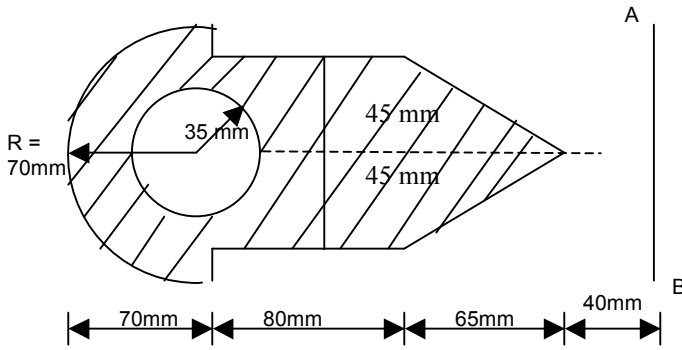


18. Find I_{xx} & I_{yy}



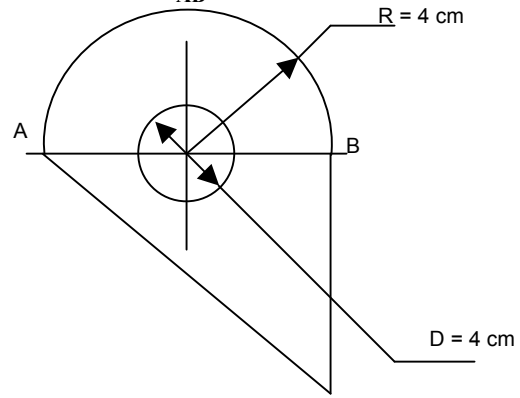
Find M.I. of plane lamina about axis AB.

19.



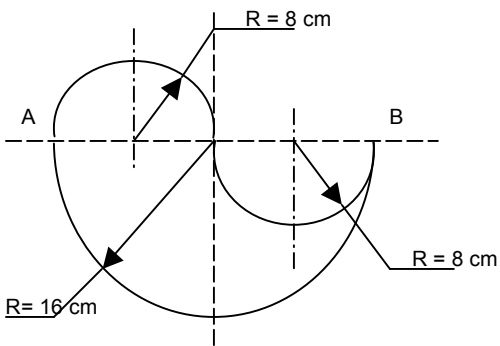
$$I_{AB} = 401.4 \times 10^6 \text{ mm}^4$$

20. Find I_{AB}



$$I_{AB} = 429.29\text{ cm}^4$$

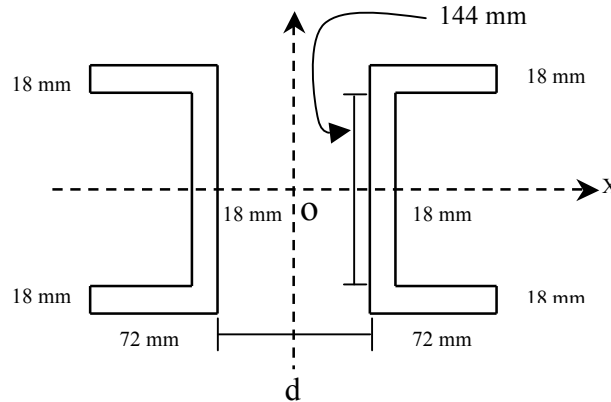
21. Find I_{AB}



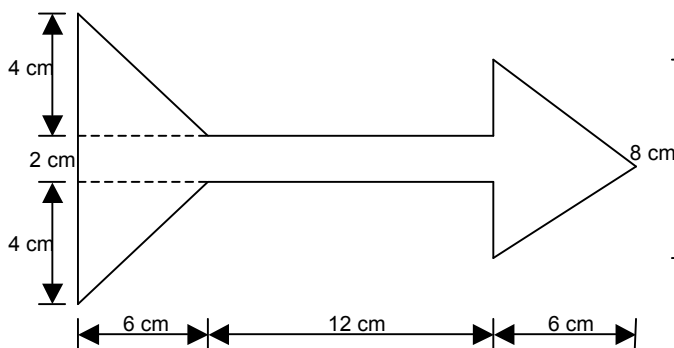
$$I_{AB} = 25736 \text{ cm}^4$$

22. Two equal channels are kept as shown in figure at a distance 'd' between them, to form the cross section of a column. Find the value of the distance 'd' if the centroidal moments of inertia I_X and I_Y of the cross section are equal.

$$[d = 77.41 \text{ mm}]$$

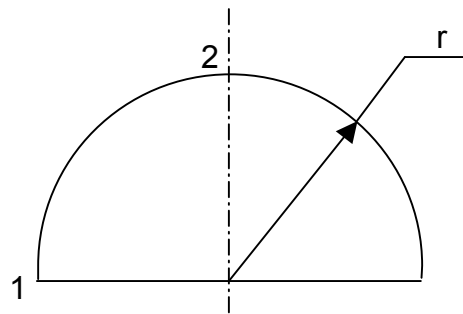


23. Find P.M.I about centroidal axis.



$$I_{zz} = 5308 \text{ cm}^4$$

24. Find P.M.I about points 1 & 2.



$$I_{zz1} = 2.35 r^4$$

$$I_{zz2} = 1.02 r^4$$