



# **MATHS**

**NCERT - FULL MARKS**

**MATHEMATICS(TAMIL)**

## **APPENDIX 2 MATHEMATICAL MODELLING**

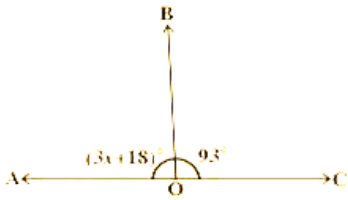
**Example**

1. The angle of elevation of the top of a tower from a point O on the ground, which is 450 m away from the foot of the tower, is  $40^\circ$ . Find the height of the tower.

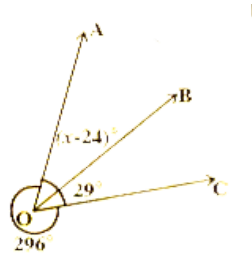


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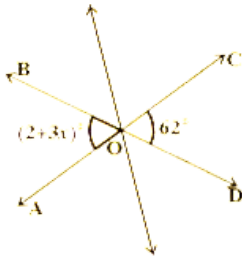
2. Find the value of  $x$  in the following figures.



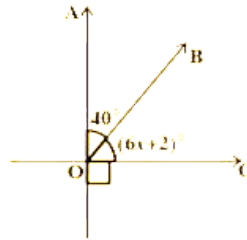
(i)



(ii)



(iii)



(iv)



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3. Suppose a population control unit wants to find out "how many people will be there in a

certain country after 10 years".



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**4.** The angle of elevation of the top of a tower from a point  $O$  on the ground, which is 450 m away from the foot of the tower, is  $40^\circ$ . Find the height of the tower.



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5. A farm house uses atleast 800 kg of special food daily. The special food is a mixture of corn and soyabean with the following compositions

Material	Nutrients present per Kg Protein	Nutrients present per Kg Fibre	Cost per Kg
Corn	.09	.02	Rs 10
Soyabean	.60	.06	Rs 20

The dietary requirements of the special food stipulate atleast 30% protein and at most 5% fibre. Determine the daily minimum cost of the food mix.



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**6.** Suppose a population control unit wants to find out "how many people will be there in a certain country after 10 years".



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