



# MATHS

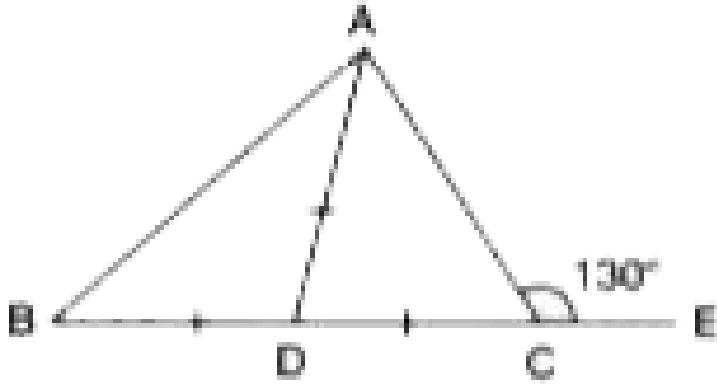
## BOOKS - ICSE

### ISOSCELES TRIANGLES

#### Exercise 10 A

1. Calculate :

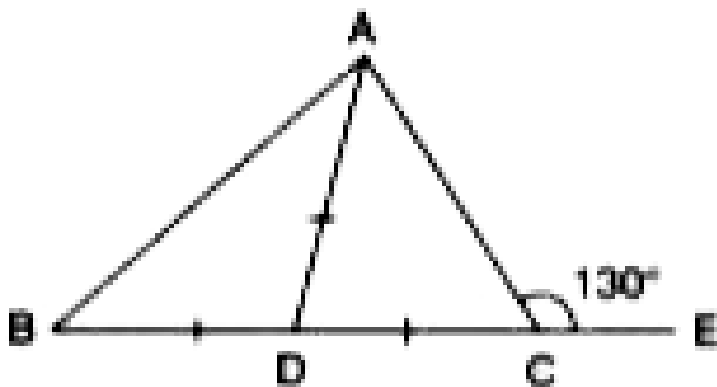
$\angle ADC$



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2. Calculate :

$\angle ABC$

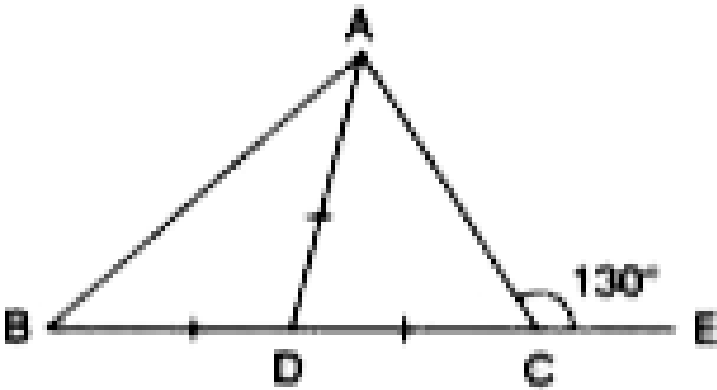




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3. Calculate :

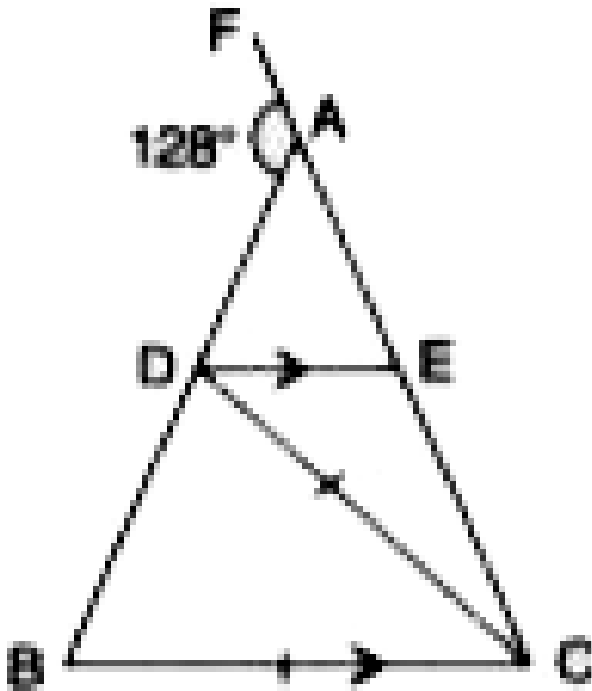
$\angle BAC$



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4. In the following figure.  $AB = AC$ ,  $BC = CD$  and  $DE$  is parallel to  $BC$ , Calculate :

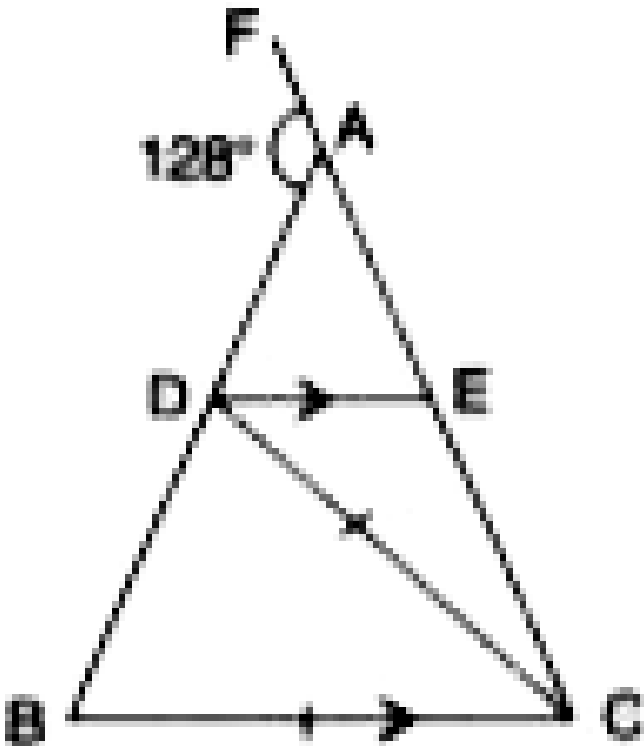
$\angle CDE$



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5. In the following figure.  $AB = AC$ ,  $BC = CD$  and  $DE$  is parallel to  $BC$ , Calculate :

$\angle DCE$



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6.

Calculate

$x$

:



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7.

Calculate

x

:

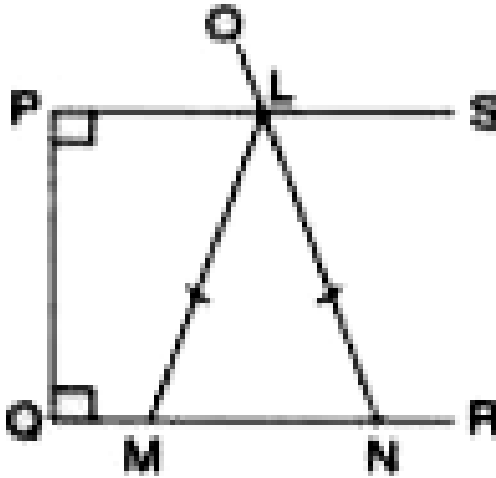


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8. In the figure given below.  $LM = LN$  : angle

$\angle PLN = 110^\circ$  . Calculate :

$\angle LMN$

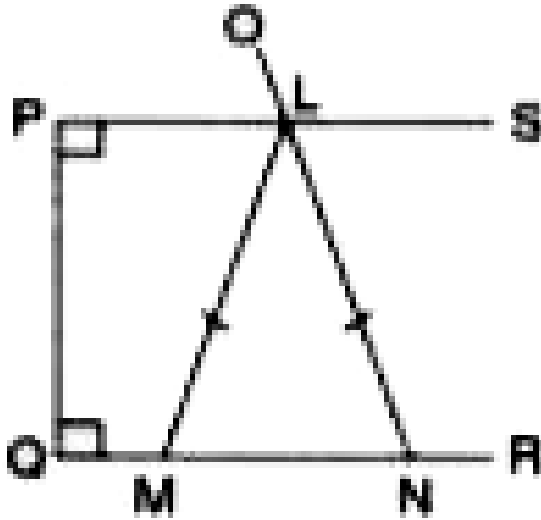


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9. In the figure given below.  $LM = LN$  : angle  $PLN = 110^\circ$  . Calculate :



$\angle MLN$



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**10.** An isosceles triangle  $ABC$  has  $AC = BC$ .  $CD$  bisects  $AB$  at  $D$  and  $\angle CAB = 55^\circ$ . "Find" :

$\angle DCB$



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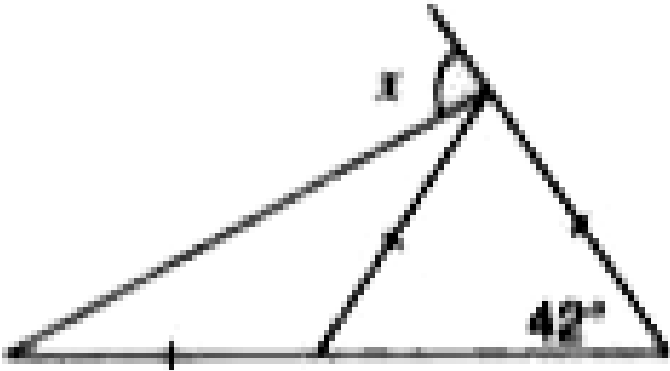
11. An isosceles triangle ABC has  $AC = BC$ . CD bisects AB at D and  $\angle CAB = 55^\circ$ . "Find" :

$\angle CBD$



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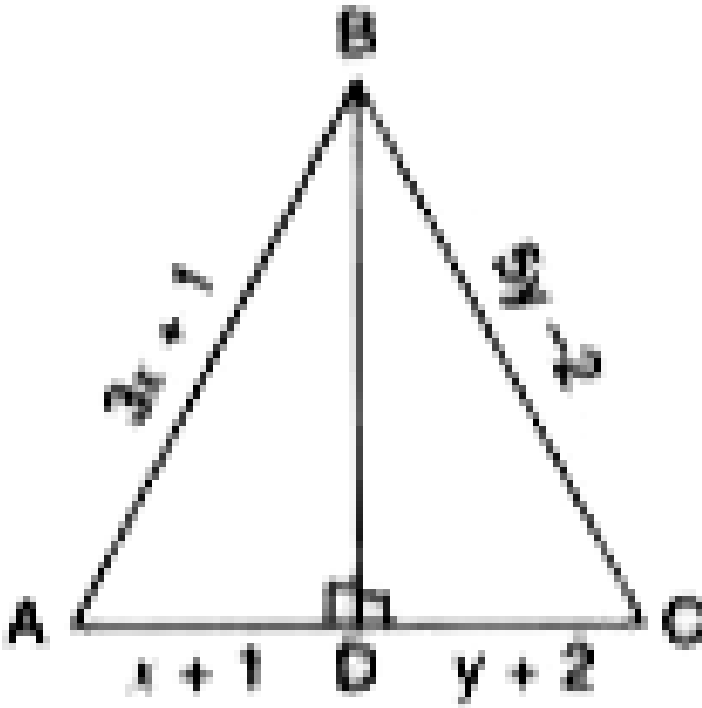
12. Find  $x$  :



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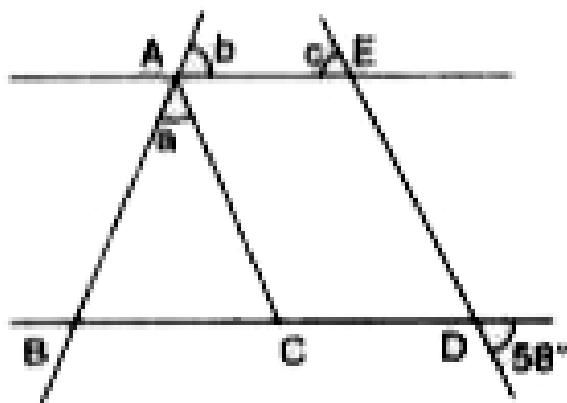
13. In the triangle  $ABC$   $BD$  bisects angle  $B$  and is perpendicular to  $AC$ , If the lengths of the sides of the triangle are expressed in terms of

x and y as shown, find the values of x and y.



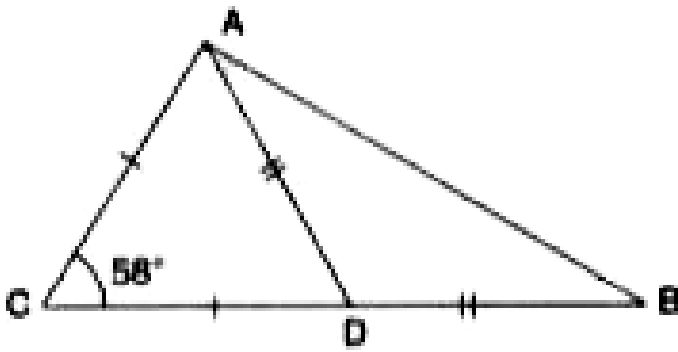
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14. In the given figure :  $AE \parallel BD$ ,  $AC \parallel ED$  and  $AB = AC$ . Find  $\angle a$ ,  $\angle b$  and  $\angle c$ .



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15. In the following figure :  $AC = CD$ ,  $AD = BD$  and  $\angle C = 58^\circ$ .



Find angle CAB.

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16. In the figure of Q. No.11, given above, if  $AC = AD = CD = BD$ , find angle ABC.

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17. In triangle  $ABC$  ,  $AB = AC$  and  $\angle A : \angle B = 8 : 5$ , find angle  $A$  .



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18.  $ABC$  is an equilateral triangle. Its side  $BC$  is produced upto point  $E$  such that  $C$  is mid-Point of  $BE$ . Calculate the measure of angles  $ACE$  and  $AEC$ .



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**19.** In triangle ABC, D is a point in AB such that  $AC = CD = DB$ . If  $\angle B = 28^\circ$ , find the angle ACD.

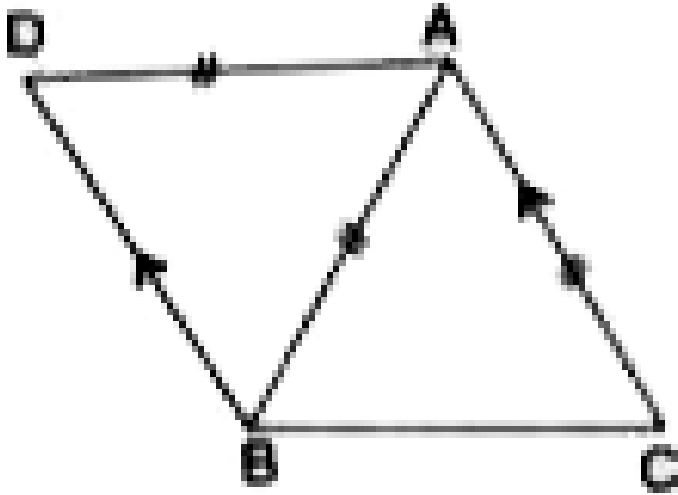


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**20.** In the given alongside figure,  $AD = AB = AC$ , BD is parallel to CA and angle  $ACB = 65^\circ$ . Find



angle DAC.



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**Exercise 10 B**

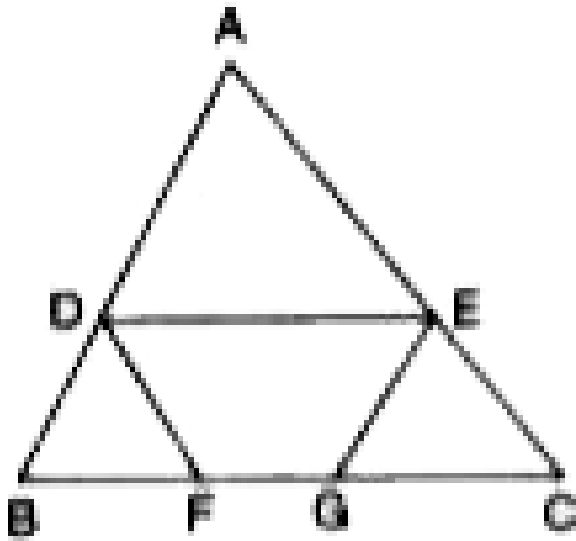
1. Sides  $AB$  and  $AC$  of a triangle  $ABC$  are equal.  $BC$  is produced through  $C$  upto point  $D$  such that  $AC = CD$ .  $D$  and  $A$  are joined and produced (through vertex  $A$ ) upto point  $E$ . If angle  $BAE = 108^\circ$ , find angle  $ADB$ .



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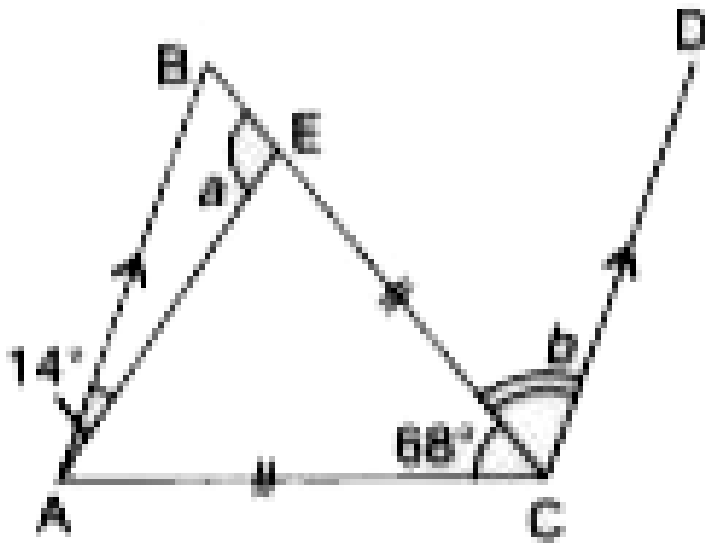
2. The given figure shows an equilateral triangle  $ABC$  with each side  $15$  cm. Also  $DE \parallel BC$ ,  $DF \parallel AC$  and  $EG \parallel AB$ . If  $DE + DF + EG = 20$

cm, find  $FG$  .



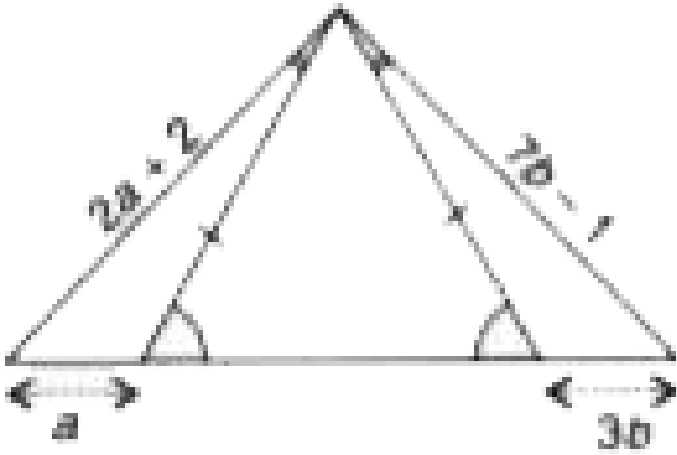
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3. Using the information , given in each of the following figures, find the values of  $a$  and  $b$ .



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4. Using the information , given in each of the following figures, find the values of  $a$  and  $b$ .



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