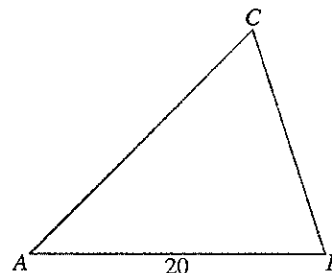
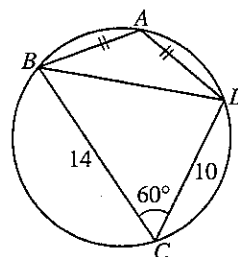


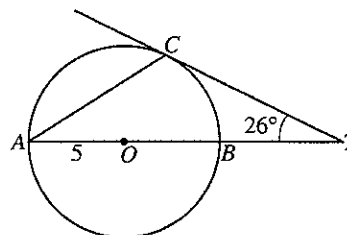
9. In  $\triangle ABC$ ,  $AB = 20$  cm. It is given that  $BC$  is 15% shorter than  $AB$  and  $AC$  is 10% longer than  $AB$ . Find
- the length of  $BC$ ,
  - the length of  $AC$ ,
  - the largest angle of  $\triangle ABC$ ,
  - the area of  $\triangle ABC$ .



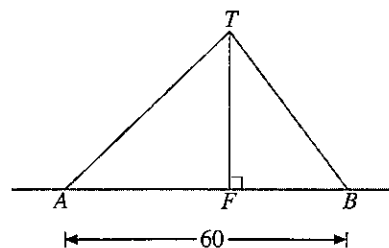
10. In the diagram,  $ABCD$  is a quadrilateral with its vertices on a circle.  $AB = AD$ ,  $BC = 14$  cm,  $CD = 10$  cm and  $\angle BCD = 60^\circ$ . Find
- the length of  $BD$ ,
  - $\angle ABC$ ,
  - the length of  $AB$ ,
  - the area of the quadrilateral  $ABCD$ .



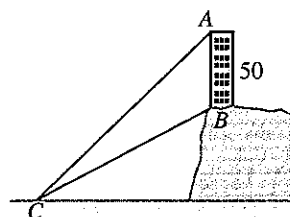
11. In the diagram,  $O$  is the centre of the circle of radius 5 cm.  $CT$  is the tangent to the circle at  $C$ .  $AOBT$  is a straight line and  $\angle BTC = 26^\circ$ . Find
- $\angle CAB$ ,
  - the length of  $CT$ ,
  - the area of  $\triangle ACT$ .



12. In the diagram,  $TF$  is a vertical tower standing on the horizontal ground  $AFB$  and  $AB = 60$  m. The angles of depression of  $A$  and  $B$  from  $T$  are  $42^\circ$  and  $53^\circ$  respectively. Find
- the distance  $AT$ ,
  - the height of the tower  $TF$ .



13. A building  $AB$ , located on the top of a terrace, is 50 m high. From a point  $C$  on the ground, the angles of elevation of the top  $A$  and the base  $B$  of the building are  $42^\circ$  and  $27^\circ$  respectively. Find
- the distance  $AC$ ,
  - the horizontal distance from  $C$  to the building,
  - the height of the terrace.



14. In the diagram,  $AB$ ,  $BC$ ,  $CD$  and  $DA$  are paths in a park.  $AB = 350$  m,  $BC = 150$  m and  $CD = 200$  m.  $B$  is due East of  $A$ .  $C$  is due North of  $B$ . The bearing of  $D$  from  $C$  is  $320^\circ$ . Find
- the distance  $DF$ ,
  - the distance  $AF$ ,
  - the distance and bearing of  $D$  from  $A$ ,
  - the area of  $ABCD$ .

