



1. In Fig. 1.1,  $TA$  is a tangent to the circle from a point  $T$  and  $TBC$  is a secant to the circle. If  $AD$  is the bisector of  $\angle CAB$ , prove that  $\triangle ADT$  is isosceles.

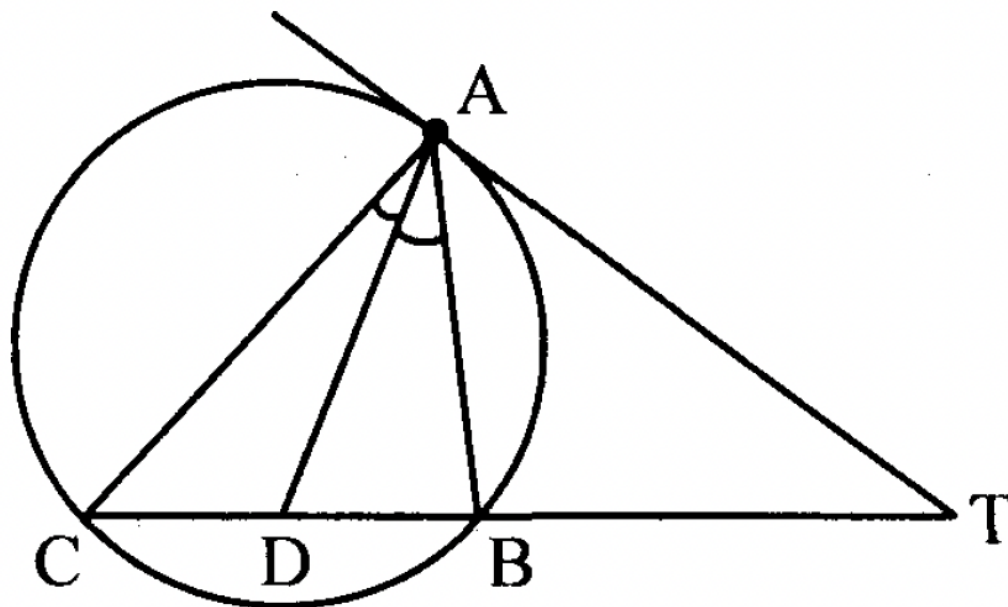


Fig. 1.1

2. Which term of the A.P. 3, 15, 27, 39, ... will be 132 more than its  $54^{th}$  term?