



FWC  
Entrance

November 13, 2022,  
Duration 30 min

1. In Fig. 1.1,  $AB$  is the diameter of a circle centred at  $O$ .  $BC$  is the tangent to the circle at  $B$ . If  $OP$  bisects the chord  $AD$  and  $\angle AOP = 60^\circ$ , then find  $\angle C$ .

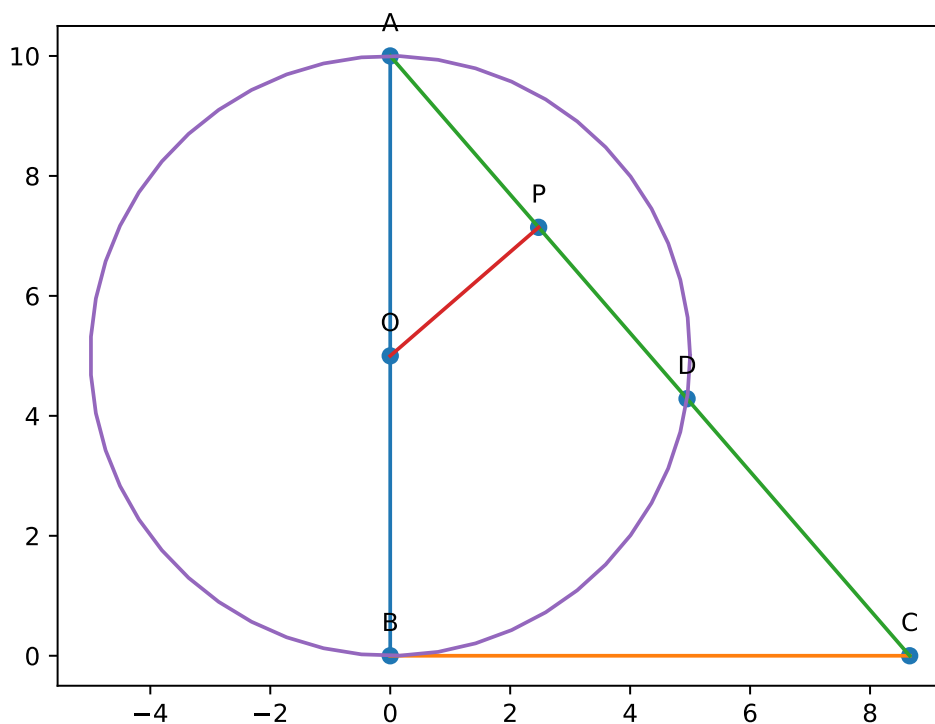


Fig. 1.1

2. Find the sum of first 20 terms of an A.P. whose  $n^{\text{th}}$  term is given as

$$a_n = 5 - 2n. \quad (2.1)$$