9

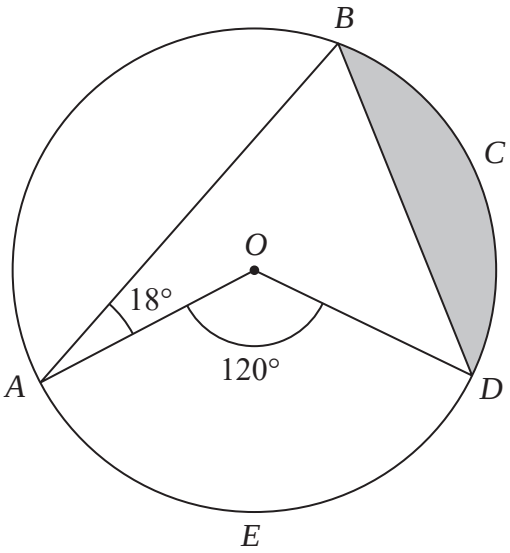

Diagram **NOT** accurately drawn

Figure 2

Figure 2 shows a circle *ABCDE* with centre *O*.

$\angle BAO = 18°$ $\angle AOD = 120°$

The area of segment *BCD*, shown shaded in Figure 2, is $T\,\text{cm}^2$

Given that the perimeter of the sector *AODE* is $5(3 + \pi)\,\text{cm}$,

calculate the value, to one decimal place, of *T*.

(6)

$$\left[\text{Area of triangle} = \frac{1}{2}ab\sin C\right]$$

Question 9 continued

(Total for Question 9 is 6 marks)