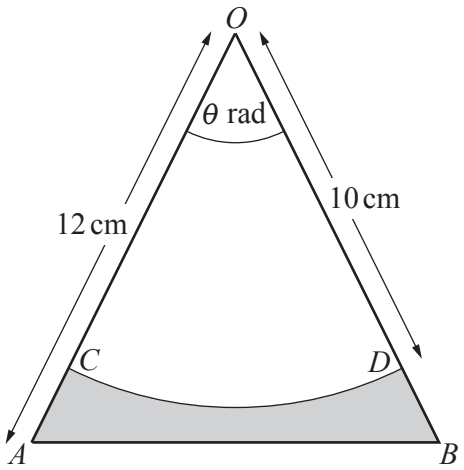
7



The diagram shows an isosceles triangle OAB such that $OA = OB = 12\,\text{cm}$ and angle $AOB = \theta$ radians. Points C and D lie on OA and OB respectively such that CD is an arc of the circle, centre O, radius 10 cm. The area of the sector $OCD = 35\,\text{cm}^2$.

(a) Show that $\theta = 0.7$. [1]

(b) Find the perimeter of the shaded region. [4]

(c) Find the area of the shaded region. [3]

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