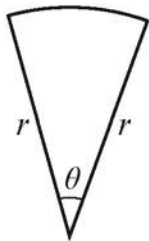


- 7 A wire, 10 cm long, is bent to form the perimeter of a sector of a circle, as shown in the diagram. The radius is r cm and the angle at the centre is θ radians.



Determine the maximum possible area of the sector, showing that it is a maximum.

[6]