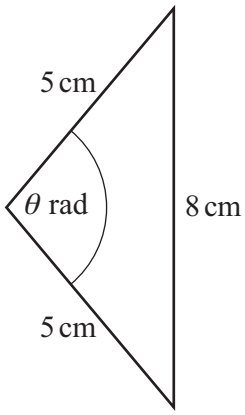
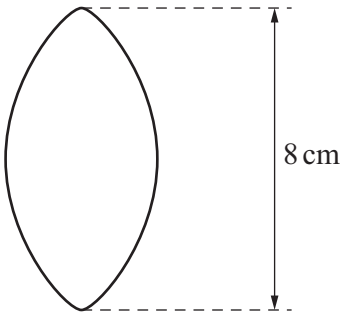
9 **(a)**



The diagram shows an isosceles triangle.

Find the value of θ in radians. [2]

(b)



This diagram shows a shape made of two arcs.
Each arc is part of a circle with radius 5 cm.
The height of the shape is 8 cm.

Use your answer to **part (a)** to find

(i) the perimeter of the shape [2]

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(ii) the area of the shape. [3]

10 In this question a, b and n are constants.

When $5(2+ax)^n$ is written in ascending powers of x, the first three terms are $640+b^2x+30\,240x^2$.

Find the value of a and the possible values of b. [5]

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