

6

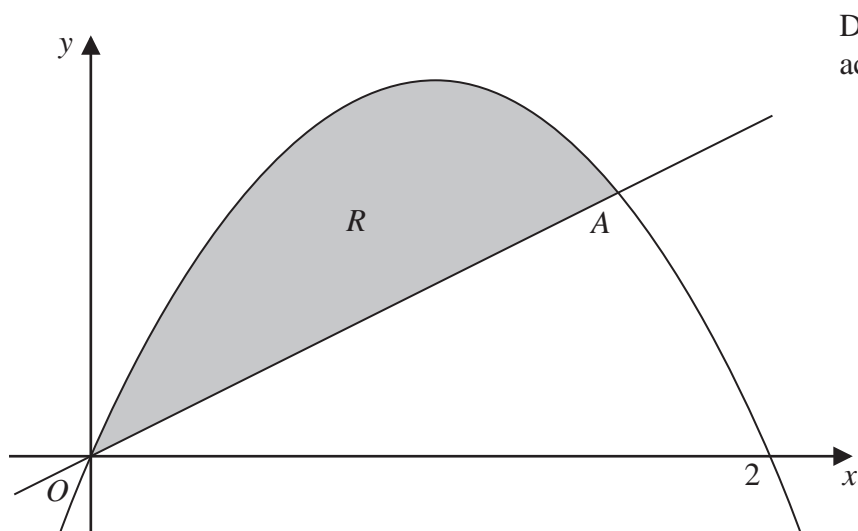
Diagram **NOT**
accurately drawn

Figure 2

The region R , shown shaded in Figure 2, is bounded by the curve with equation $y = 2x - x^2$ and the line with equation $2y - x = 0$

The curve and the line intersect at the origin O and the point A .

- (a) Show that the point A has coordinates $\left(\frac{3}{2}, \frac{3}{4}\right)$. (2)

The region R is rotated through 360° about the x -axis.

- (b) Use algebraic integration to find, in terms of π , the volume of the solid formed. (6)

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Question 6 continued

Area for writing answers to Question 6 continued.



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Question 6 continued

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Question 6 continued

Handwriting practice area with horizontal dotted lines.

(Total for Question 6 is 8 marks)

