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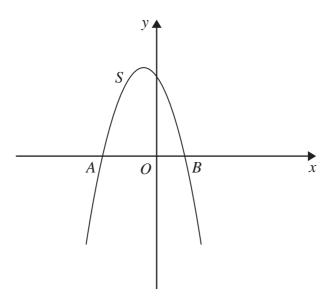


Figure 2

Figure 2 shows the curve S with equation  $y = 8 - 2x - x^2$ 

The curve S crosses the x-axis at the points A and B.

(a) Find the x coordinate of A and the x coordinate of B.

(3)

(b) Use calculus to find the area of the finite region bounded by S and the x-axis.

(4)

The curve *T* with equation  $y = x^2 + x + 6$  intersects *S*.

(c) Find the x coordinates of the points of intersection of S and T.

(2)

(d) Use calculus to find the area of the finite region bounded by S and T.

**(4)** 



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Question 9 continued		



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