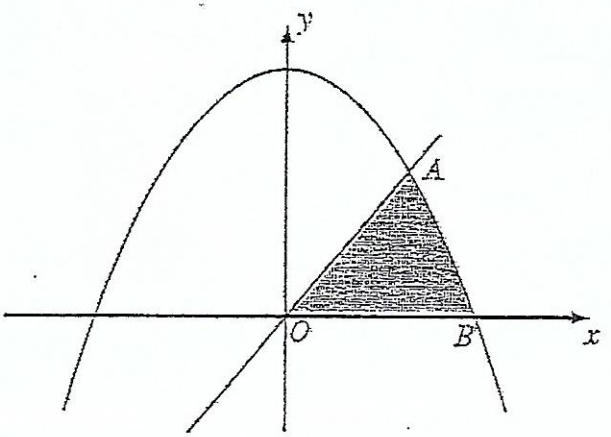
117. (b)



The diagram shows a sketch of the curve $y = 4 - x^2$ and the line $y = 3x$. The curve and the line intersect at the point A in the first quadrant and the curve intersects the positive x-axis at the point B.

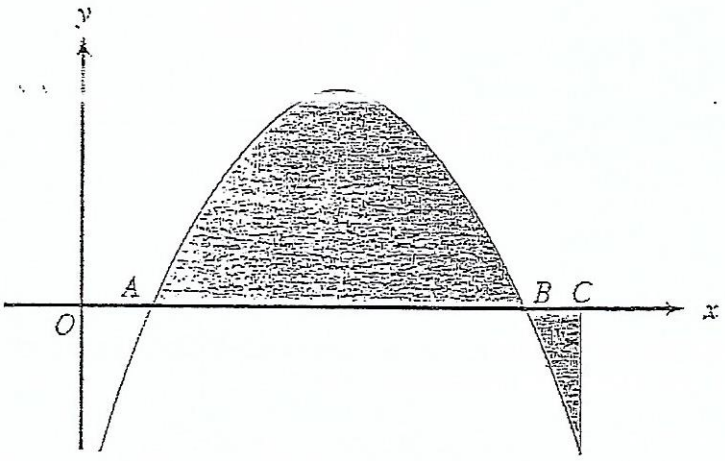
(i) Showing your working, find the coordinates of A and the coordinates of B.

(ii) Find the area of the shaded region.

[12]

June 2008

118. (b)



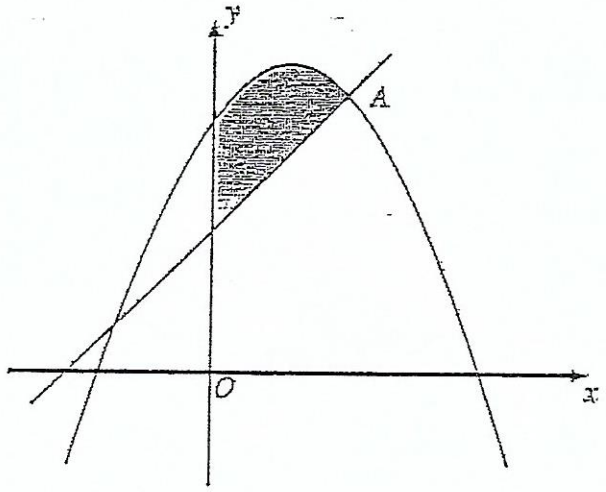
The diagram shows a sketch of the curve $y = 5x - 4 - x^2$.
The curve intersects the x-axis at the points A and B. The point C has coordinates (5, 0).

(i) Find the x-coordinates of the points A and B. [3]

(ii) Find the total area of the shaded regions. [7]

Jan 2009

119. (b)



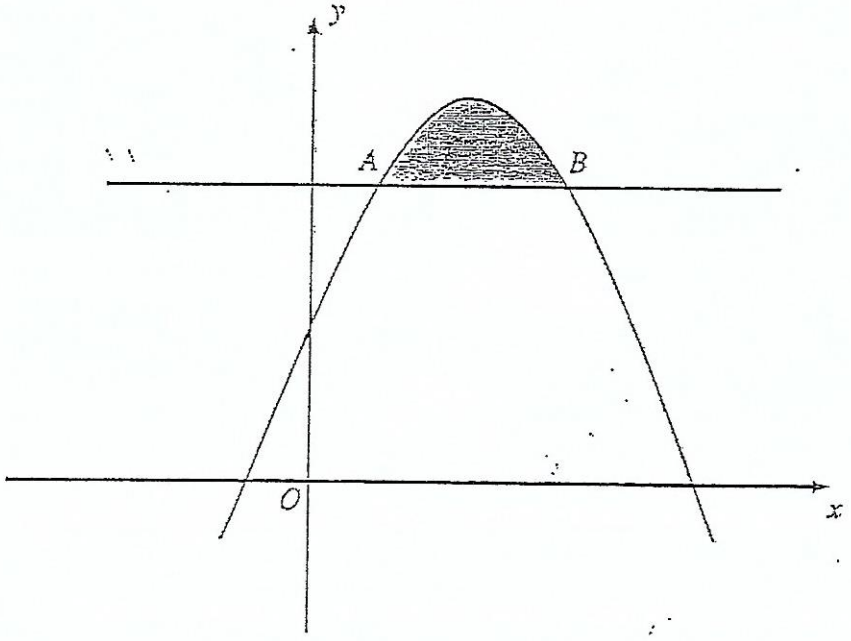
The diagram shows a sketch of the curve $y = 6 + 4x - x^2$ and the line $y = x + 2$. The point of intersection of the curve and the line in the first quadrant is denoted by A.

(i) Find the coordinates of A.

(ii) Find the area of the shaded region. [10]

June 2009

120. (b)



The diagram shows a sketch of the curve $y = 5 + 4x - x^2$ and the line $y = 8$. The curve and the line intersect at the points A and B.

(i) Showing your working, find the x-coordinates of A and B.

(ii) Find the area of the shaded region. [10]

Jan 2010