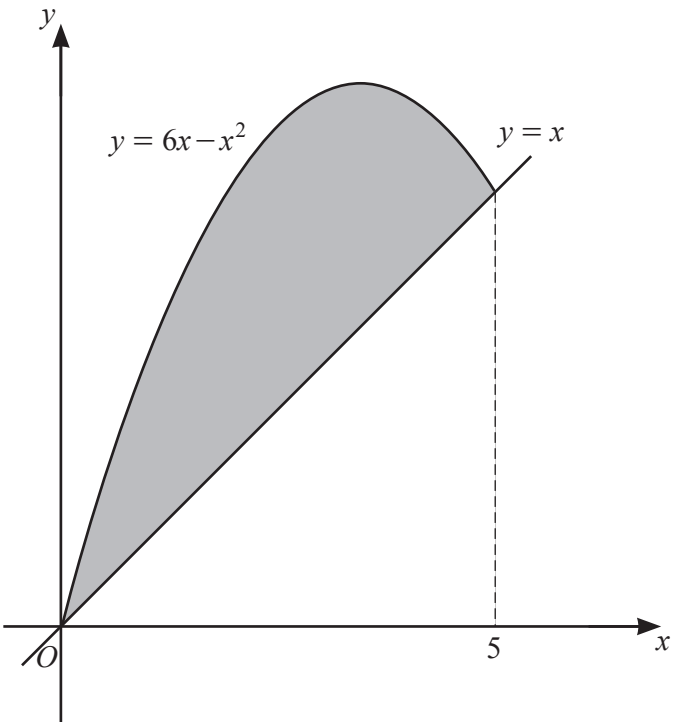
7 (a)



The diagram shows the curve $y = 6x - x^2$ for $0 \leqslant x \leqslant 5$ and the line $y = x$. Find the area of the shaded region. [4]

(b) **(i)** Find $\int\left(\frac{1}{(2x-6)^3}+\cos x\right)\mathrm{d}x$. [3]

(ii) Find $\int\frac{(x^4+1)^2}{2x}\mathrm{d}x$. [3]