

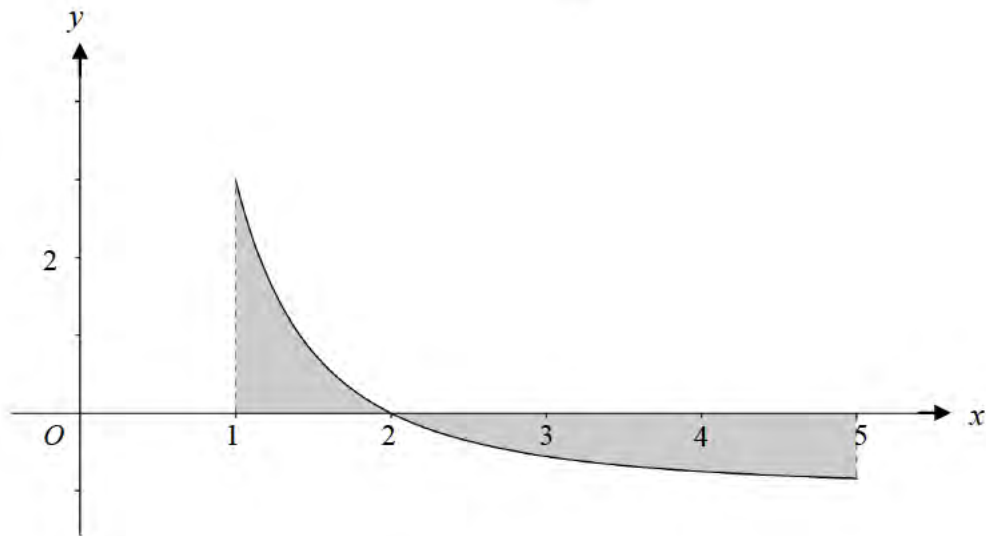
5 (a) Find  $\int (x^3 - 6x) dx$ .

[3]

(b) (i) Find  $\int \left( \frac{4}{x^2} - 1 \right) dx$ .

[3]

(ii) The diagram shows part of the curve  $y = \frac{4}{x^2} - 1$ .



The curve crosses the  $x$ -axis at  $(2, 0)$ .

The shaded region is bounded by the curve, the  $x$ -axis, and the lines  $x = 1$  and  $x = 5$ .

Calculate the area of the shaded region.

[3]