

13.5) Areas under curves

Worked example

Find the area of the finite region bounded by the curve with equation $y = x^3$, the lines with equation $x = 1$ and $x = 4$ and the x -axis.

Your turn

Find the area of the finite region bounded by the curve with equation $y = x^4$, the lines with equation $x = 3$ and $x = 5$ and the x -axis.

$$\frac{2882}{5}$$

Worked example

Find the area of the finite region between the curve with equation $y = 6 + x - x^2$ and the x -axis.

Your turn

Find the area of the finite region between the curve with equation $y = 20 - x - x^2$ and the x -axis.

$$\frac{243}{2}$$

Worked example

Find the area of the finite region bounded by the curve with equation $y = x^2(x + 2)$ and the x -axis

Your turn

Find the area of the finite region bounded by the curve with equation $y = x^2(3 - x)$ and the x -axis

$$\frac{27}{4}$$