

2.80  
23

ii) Find the area of the region

$$\int_0^2 (3x^{\frac{2}{3}} - x^2) dx = \left[ \frac{3x^{\frac{5}{3}}}{\frac{5}{3}} - \frac{x^3}{3} \right]_0^2 = \frac{9}{5} x^{\frac{5}{3}} - \frac{x^3}{3} \Big|_0^2 = \frac{9}{5} \sqrt[3]{32} - \frac{8}{3}$$