

6 (a) Find $\int \left(6x^2 - \frac{5}{\sqrt{x}} \right) dx$

[3 marks]

6 (b) The gradient of a curve is given by

$$\frac{dy}{dx} = 6x^2 - \frac{5}{\sqrt{x}}$$

The curve passes through the point (4, 90).

Find the equation of the curve.

[2 marks]