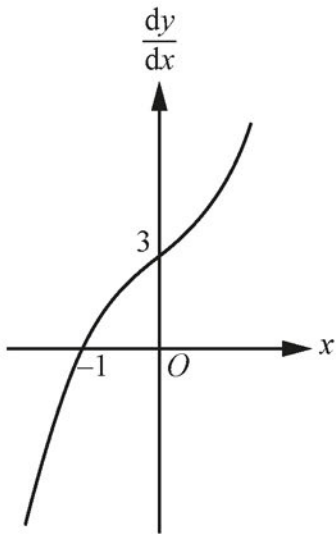


6 A curve C has an equation which satisfies $\frac{d^2y}{dx^2} = 3x^2 + 2$, for all values of x .

(a) It is given that C has a single stationary point. Determine the nature of this stationary point. **[1]**

The diagram shows the graph of the **gradient function** for C .



(b) Given that C passes through the point $(-1, \frac{1}{4})$, find the equation of C in the form $y = f(x)$. **[5]**