

5 A curve has equation $y = 4x^2 + \frac{1}{x}$.

(a) Determine the coordinates of the stationary point on the curve. **[5]**

(b) Use $\frac{d^2y}{dx^2}$ to determine whether this turning point is a maximum or a minimum. **[2]**

(c) Find the values of x for which the curve is increasing. **[2]**