

13 The curve with equation $y = px + \frac{8}{x^2} + q$, where p and q are constants, has a stationary point at $(2, 7)$.

(a) Determine the values of p and q . **[5]**

(b) Find $\frac{d^2y}{dx^2}$. **[1]**

(c) Hence determine the nature of the stationary point at $(2, 7)$. **[2]**