2   A curve has equation $y = x^5 - 5x^4$.

(a)   Find $\dfrac{\mathrm{d}y}{\mathrm{d}x}$ and $\dfrac{\mathrm{d}^2 y}{\mathrm{d}x^2}$. **[3]**

(b)   Verify that the curve has a stationary point when $x = 4$. **[2]**

(c)   Determine the nature of this stationary point. **[2]**