7 A curve has equation $y = \mathrm{p}(x)$, where $\mathrm{p}(x) = x^3 - 4x^2 + 6x - 1$.

(a) Find the equation of the tangent to the curve at the point (3, 8). Give your answer in the form $y = mx + c$. [5]

(b) **(i)** Given that p^{-1} exists, write down the gradient of the tangent to the curve $y = \mathrm{p}^{-1}(x)$ at the point (8, 3). [1]

(ii) Find the coordinates of the point of intersection of these two tangents. [2]

© UCLES 2021