5 At the point P on the curve $y = e^{3x} - 21x - 8$ the gradient of the tangent is 3.

(a) Determine the x-coordinate of P. Give your answer in the form $\ln a$, where a is an integer to be determined. **[4]**

(b) Hence determine the equation of the tangent at P. Give your answer in the form $y = 3x + c$ where c is an exact constant to be determined. **[3]**