1 **(a)** Differentiate the following.

   (i) $\dfrac{x^2}{2x+1}$ [3]

   (ii) $\tan(x^2 - 3x)$ [2]

(b) Use the substitution $u = \sqrt{x} - 1$ to integrate $\dfrac{1}{\sqrt{x}-1}$. [4]

(c) Integrate $\dfrac{x-2}{2x^2 - 8x - 1}$. [2]