7 **(a)** Show that $\frac{2}{2x+3}-\frac{1}{x-1}+\frac{1}{(x-1)^2}$ can be written as $\frac{8-3x}{(x-1)^2(2x+3)}$. [2]

(b) Find $\int_2^a \frac{8-3x}{(x-1)^2(2x+3)}\mathrm{d}x$ where $a > 2$. Give your answers in the form $c+\ln d$, where c and d are functions of a. [6]