Question 1 (25 marks)

(a) In the expansion of $(2x+1)(x^2+px+4)$, where $p \in \mathbb{N}$, the coefficient of x is twice the coefficient of x^2 . Find the value of p.



(b) Solve the equation $\frac{3}{2x+1} + \frac{2}{5} = \frac{2}{3x-1}$ where $x \neq -\frac{1}{2}$, $\frac{1}{3}$, and $x \in \mathbb{R}$.

