

Question 4**(8 marks)**

- (a) Function $f(x) = \frac{5(x+1)}{(x-1)(x^2+3x+1)}$ can be expressed in the form $\frac{a}{x-1} + \frac{bx+c}{x^2+3x+1}$.

Determine the value of the constants a , b and c .

(3 marks)

(b) Hence determine $\int \frac{10x + 10}{(x - 1)(x^2 + 3x + 1)} dx$. (5 marks)