

$$\int \frac{dx}{4x^2 + 4x - 3} = \frac{1}{4} \int \frac{dx}{\left(x - \frac{1}{2}\right)\left(x + \frac{3}{2}\right)} = \frac{1}{8} \ln \left| \frac{2x - 1}{2x + 3} \right| + C$$