Partial Fraction(Improper fraction)

Let $f(x) \equiv \dfrac{x^2 + 3x + 3}{(x+1)(x+3)}$.

(i) Express $f(x)$ in partial fractions. [5]

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Let $f(x) = \dfrac{4x^2 + 7x + 4}{(2x + 1)(x + 2)}$.

(i) Express $f(x)$ in partial fractions. [5]

Find the values of the constants A, B, C and D such that

$$\frac{2x^3 - 1}{x^2(2x - 1)} \equiv A + \frac{B}{x} + \frac{C}{x^2} + \frac{D}{2x - 1}.$$

[5]