

partial fractions

Use the method of partial fractions (and polynomial division) to evaluate these integrals:

1.

$$\int \frac{1-x}{x^2+3x+2} dx$$

2.

$$\int \frac{x^3+4x^2+4x+3}{x^2+3x+2} dx$$

3.

$$\int \frac{x^3 + 1}{x^3 - x^2} dx$$

4.

$$\int \frac{x - 2}{x^3 + x} dx$$