

Math 232 Worksheet 7 - Integration by Partial Fractions

Evaluate the integral using partial fractions.

$$\begin{aligned} (1) \int \frac{1}{x^2 + 4x + 4} dx & \quad (2) \int \frac{1}{x^2 + 4x + 5} dx & (3) \int \frac{x^2 + 1}{x + 1} dx & (4) \int \frac{1}{x^2 - 1} dx \\ (5) \int \frac{1}{x^3 - x} dx & (6) \int \frac{1}{x^3 - x^2} dx & (7) \int \frac{x + 3}{x^2 + 4x + 8} dx & (8) \int \frac{1}{x^3 + 2x^2 + 2x} dx \end{aligned}$$