

Worksheet for 6-7-06

Partial Fractions Examples

1. Evaluate the following:

$$(a) \int \frac{dt}{t^3 + t^2 - 2t}$$

$$(b) \int_0^1 \frac{x^3}{x^2 + 2x + 1} dx$$

$$(c) \int_4^8 \frac{y dy}{y^2 - 2y - 3}$$

$$(d) \int \frac{y^2 + 2y + 1}{(y^2 + 1)^2} dy$$

Trigonometric Substitution Examples

2. Evaluate the following definite integrals

$$(a) \int \frac{dx}{\sqrt{4+x^2}}$$

$$(b) \int \frac{dx}{\sqrt{25x^2-4}}$$