

(7.4) Integration of Rational Functions by Partial Fractions

Full Name: _____

1. Use a partial fraction decomposition to evaluate each of the following indefinite integrals.

(a) $\int \frac{1}{x^2 - 25} dx$

(b) $\int \frac{-4x + 22}{x^2 - 6x + 8} dx$

$$(c) \int \frac{6x^2 - 7x + 6}{x^3 + 3x^2} dx$$

$$(d) \int \frac{-x^2 + 4x + 4}{x^3 - 4x^2 + 4x} dx$$

$$(e) \int \frac{x^2 - 5x - 8}{x^3 + 4x} dx$$