

§7.4 Integration of Rational Functions by Partial Fractions

In-class Activity 7.4



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Evaluate:

(a) $\int \frac{x+1}{x^2-4x+3} dx$

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

Activity 2: Case II: repeated linear factors of $Q(x)$

Evaluate: $\int \frac{x-2}{(x-1)(2x-1)^2} dx$

Activity 3: Case III: repeated irreducible factors of $Q(x)$

Evaluate:

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

(b) $\int \frac{1}{x^3-8} dx$

Activity 4: Case IV: non-proper rational functions

Evaluate: $\int \frac{x^2 + 4}{x^2 - 4} dx$