

GROUP WORK I, SECTION 8.4

Partial Fractions (Version 3)

1. Compute the following integrals:

(a) $\int \frac{dx}{x+1}$

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

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

2. Factor $x^4 + 3x^3 + 6x^2 + 12x + 8$.

3. Compute $\int \frac{20x^2 dx}{x^4 + 3x^3 + 6x^2 + 12x + 8}$.

4. Compute $\int \frac{x^4 + 3x^3 + 26x^2 + 12x + 8}{x^4 + 3x^3 + 6x^2 + 12x + 8} dx$.