1. (a motivating example) $\displaystyle\int \frac{3x}{x^2 - x - 2}\, dx$

2. Evaluate $\displaystyle\int \frac{7x + 3}{x^3 - 4x^2 + 3x}\, dx$

3. Summary of Partial Fraction Decomposition Structure

4. Rewrite the expression $\frac{x^3-2x^2+3x-6}{(x-1)^2}$ using partial fraction decomposition and use the decomposition to evaluate the integral $\int \frac{x^3-2x^2+3x-6}{(x-1)^2} \, dx$

5. Rewrite the expression $\frac{4x^3+2x-1}{x^4+x^2}$ using partial fraction decomposition and use the decomposition to evaluate the integral $\int \frac{4x^3+2x-1}{x^4+x^2} \, dx$

§3.4