Problem 1. Evaluate the following indefinite integrals:

1.

$$\int \frac{3x^2}{x^2 - 4} dx$$

2.

$$\int \frac{x - 3}{x + 2} dx$$

Problem 2. Show how you would write the partial fraction decomposition of $f(x) = \frac{1}{(x-1)^n}$, where n is an integer. You do not need to evaluate the integral or even find any constants.