Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Compute the integral

$$\int x^3(x+1)^2 dx.$$

2. Compute the integral

$$\int \left(\frac{x^5 - 1}{x} - 14e^{-7x} \right) dx$$