Q1. $\int \dfrac{x^2 + 7x}{(1 - x^2)(x + 1)} dx$

Q2. $\int \dfrac{dx}{x\sqrt{x^2 + 7}}$

Q1. $\displaystyle\int \frac{x^2 + 2x + 1}{(x^2 + 4)^2}\,dx$

Q2. $\displaystyle\int_{-1}^{0} \frac{dx}{x^2}$

Q1. $\int \dfrac{x^3 + x^2 + 4x + 2}{\left(2 + x^2\right)^2} dx$

Q2. Does $\displaystyle\int_{2}^{\infty} \dfrac{x^2 + x + 1}{x^3 - x - 1} dx$ converge or diverge? (**Hint:** *it is easier to use a test !)*