Problem 1. Find the degree 2 Taylor polynomial T_2 of $f(x) = \frac{1}{x+1}$ centered at 1.

Problem 2. Find the degree n Taylor polynomial T_n of $f(x) = \frac{1}{x+1}$ centered at 1.

Problem 3. For $f(x) = \frac{1}{x+1}$, give a bound on $|f(1.1) - T_n(1.1)|$ using the Taylor polynomial error bound.