Problems 01

Due: Friday, 13 January 2023 before 17:00 EST

P1.1. Carefully read both pages of the course website. Give a brief review of the site: what did you like, what would you improve, what information is missing, list all errors you found, etc. Add an explicit acknowledgement that you understand the policies and procedures of this course.

P1.2. Provide a short explanation of why you are enrolled in this course. Why you are taking this course? How does it fits within your educational goals? What skills expect you anticipate developing? Is there anything the instructor should know about you?

P1.3. For any nonnegative integer n, give two different proofs for the equation

$$\sum_{k=0}^{n} \frac{1}{(k+1)(k+2)} = \frac{n+1}{n+2}.$$

(i) Verify this equation via induction on n.

(ii) Derive this equation using partial fractions.