7. [15 points] Consider the function
\[ f(x) = \frac{1}{(x - 2)^2(x - 3)} \]

a. [4 points] Approximate the integral \( \int_{-5}^{1} f(x) \, dx \) using MID(3). Do not decompose \( f(x) \) before doing the approximation. Write out each term in any sums you make.

b. [4 points] Approximate the integral \( \int_{-5}^{1} f(x) \, dx \) using TRAP(3). Do not decompose \( f(x) \) before doing the approximation. Write out each term in any sums you make.

c. [7 points] Split the function \( f(x) \) into partial fractions with two or more terms. Do not integrate these terms.