

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.