Quiz #5, 2/16 Math 157 (Calculus II), Spring 2023

Problem 1 is worth 5 points, and Problem 2 is worth 5 points, for a total of 10 points. Remember to $show\ your\ work$ on all problems!

1. Compute the indefinite integral $\int \frac{x+1}{x(x-1)} dx$ by finding the partial fraction decomposition.

2. Approximate the definite integral $\int_{-3}^{3} x^2 dx$ using the midpoint approximation with n=3 subintervals. What is the error of your approximation compared to the actual value of this definite integral?