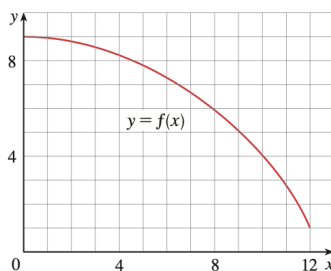# Quiz #10, 11/15
Math 156 (Calculus I), Fall 2024

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. Consider the curve $y = f(x)$ graphed below:

   Approximate the area under this curve from $x = 0$ to $x = 12$ by using three rectangles of equal width, where the heights are determined using the right endpoints of the three intervals.

2. Evaluate the following definite integrals by computing the relevant antiderivative and applying the Fundamental Theorem of Calculus.

   (a) $\int_{-1}^{1} x^2 + 2x + 1 \, dx$

   (b) $\int_{0}^{1} e^x - 1 \, dx$

   (c) $\int_{0}^{\pi} \sin(x) \, dx$