Homework 2

Gomez - Math 19B

Due: Jan 26th, 2024

Exercises are taken from section 5.2 and 5.3 in the textbook.

1. 5.2 Exercise 2: Draw a graph of the signed area represented by the integral and compute it using geometry.
$$\int_{-2}^{3} 2x + 4dx$$
2. 5.2 Exercise 12: Calculate $\int_2^5 2x + 1dx$ in two ways: As the limit $\lim_{N\to\infty} R_N$ and using geometry.
3. 5.2 Exercise 14: Refer to figure 15, Evaluate $\int_0^3 g(t)dt$ and $\int_3^5 g(t)dt$.

Files/Sect 5.2 Exercise 14-15.png

4. 5.2 Exercise 41: Prove by computing the limit of right-endpoint approximations:
$$\int_0^b x^3 dx = \frac{b^4}{4}$$

5. 5.2 Exercise 46: Use the formulas in the summary and equation (9) to evaluate the integral.

$$\int_0^1 2x^3 - x + 4dx$$

6. QUESTION 6

7. QUESTION 7

8. QUESTION 8

9. QUESTION 9