



Homework 8.4 – The Fundamental Theorem of Calculus (Part 1)

1. (1 pt) [alfredLibrary/AUCI/chapter8/lesson4/FTC3pet.pg](#)

Evaluate the definite integral if possible. Otherwise, type "improper" if the integral is improper.

$$\int_{-5}^5 \frac{8}{x^3} dx = \underline{\hspace{2cm}}$$

2. (1 pt) [alfredLibrary/AUCI/chapter8/lesson4/FTC4pet.pg](#)

Evaluate the definite integral if possible. Otherwise, type "improper" if the integral is improper.

$$\int_1^6 5 + \frac{1}{x} + \frac{1}{x^2} dx = \underline{\hspace{2cm}}$$

3. (1 pt) [alfredLibrary/AUCI/chapter8/lesson4/FTC5pet.pg](#)

Evaluate the definite integral if possible. Otherwise, type "improper" if the integral is improper.

$$\int_{-1}^1 e^{3x} dx = \underline{\hspace{2cm}}$$

4. (1 pt) [alfredLibrary/AUCI/chapter8/lesson4/FTC6pet.pg](#)

Evaluate the definite integral if possible. Otherwise, type "improper" if the integral is improper.

$$\int_0^\pi 2 \sin(x) dx = \underline{\hspace{2cm}}$$

5. (1 pt) [alfredLibrary/AUCI/chapter8/lesson4/quiz/FTC4pet.pg](#)

Use Part 1 of the Fundamental Theorem of Calculus to evaluate the definite integral.

$$\int_0^{0.4} \frac{dx}{\sqrt{1-x^2}} = \underline{\hspace{2cm}}$$