

Math 1497 – Calculus II Spring 2024 – Homework 2

Week 2: Jan. 22-26, 2024

pg. 538-9, #3, 5, 7, 11, 22, 25, 28, 31, 60 and 65.

Trig Integrals

3.	$\int \cos^5 x \sin x dx$	5.	$\int \cos^3 x \sin^4 x dx$
7.	$\int \sin^3 x \cos^2 x dx$	11.	$\int \cos^2 3x dx$
22.	$\int \sec^4 x dx$	25.	$\int \tan^5 \frac{x}{2} dx$
28.	$\int \tan^5 x \sec^4 x dx$	31.	$\int \sec^5 x \tan^3 x dx$
60.	$\int_0^{\pi/3} \tan^2 x dx$	65.	$\int_{-\pi/2}^{\pi/2} 3 \cos^3 dx$

pg. 547, #5, 7, 12, 20, 21 37, 39, and 42.

Trig Substitutions

5.	$\int \frac{\sqrt{16-x^2}}{x} dx$	7.	$\int \frac{1}{\sqrt{x^2-25}} dx$
12.	$\int \frac{x^3}{4\sqrt{4+x^2}} dx$	20.	$\int \frac{1}{\sqrt{x^2-4}} dx$
21.	$\int \frac{\sqrt{1-x^2}}{x^4} dx$	37.	$\int_0^{\sqrt{3}/2} \frac{t^2}{(1-t^3)^{3/2}} dt$
39.	$\int_0^3 \frac{x^3}{\sqrt{x^2+9}} dx$	42.	$\int_4^8 \frac{\sqrt{x^2-16}}{x^2} dx$

Due: Monday Jan. 28, 2024 by 3pm.