

## Problem Set

### Section 5.5

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#### Problem 1

Find the integral

$$\int_{-\frac{\pi}{3}}^{\frac{\pi}{3}} (x \tan(x^4) + x^2) dx$$

**Problem 2**

Find the integral

$$\int_0^{\frac{1}{2}} \frac{\cos(\sin^{-1} x)}{\sqrt{1-x^2}} dx$$

**Problem 3**

Find

$$\int \sqrt[3]{x^3 + 1} \, x^5 dx$$

**Problem 4**

Find the integral

$$\int_0^{\frac{\pi}{4}} (1 + \tan x)^3 \sec^2 x \, dx$$

**Problem 5**

Find the integral

$$\int_0^1 4e^x \sinh x \, dx$$