

MATH 152, Fall 2019

Worksheet 3

1. Using Trig substitution find

$$\int \frac{x}{\sqrt{x^2 + 4x + 5}} dx$$

2. Using Trig substitution find

$$\int \frac{1}{x + \sqrt{1 - x^2}} dx$$

3. Using Trig substitution find

$$\int x \sqrt{10x - x^2} dx$$

4. Using Trig substitution find

$$\int \sqrt{1-x} \sqrt{x+3} dx$$

5. Using Trig substitution find

$$\int \frac{\tan^{-1} x}{x^2 + 1} dx$$

6. Using u-subs and Trig substitution find

$$\int \frac{dx}{x(1+x^4)}$$