

Trig Substitution Worksheet

Thomas R. Cameron

September 15, 2025

1 Exercises

- I. Find the arc length of the curve $y = x^2/2$ on the interval $[0, 1]$.
- II. Find the area of the circle $x^2 + y^2 = r^2$, where $r > 0$.
- III. Evaluate the integral $\int \frac{\sqrt{x^2 - 25}}{x} dx$.