Calculus with Analytic Geometry II

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1 Trig Sub Worksheet

I. Find the arc length of the curve $y = x^2/2$ on the interval $[0, 1]$.

II. Find the area of the circle $x^2 + y^2 = r^2$, whre $r > 0$.

III. Evaluate the integral $\displaystyle\int \frac{\sqrt{x^2 - 25}}{x} dx$.

IV. Evaluate the integral $\displaystyle\int \frac{5x - 10}{x^2 - 3x - 4} dx$.

V. Evaluate the integral $\displaystyle\int \frac{2x + 4}{x^3 - 2x^2} dx$.

VI. Evaluate the integral $\displaystyle\int \frac{x^2 + x - 2}{3x^3 - x^2 + 3x - 1} dx$.