

Review of 4.1-4.2

$$\int dx =$$

$$\int x dx =$$

$$\int 4x dx =$$

$$\int x^3 dx =$$

$$\int 5x^3 dx =$$

$$\int (x^4 - 3x^2 + 2x - 5) dx$$

$$\int \sqrt{x} dx$$

$$\int \frac{3}{x^2} dx$$

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

Your favorite!!!!

$$\int \sin x dx$$

$$\int \cos x dx$$

$$\int \sec x \tan x dx$$

$$\int \csc x \cot x dx$$

$$\int \sec^2 x dx$$

$$\int \csc^2 x dx$$

$$\int 7\cos x dx$$

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

Solve the differential equation

$$y = \int (x^2 - 1) dx \quad \text{if } f(-1) = 3$$

**Given**  $y = \sqrt{x} + 1$  **on**  $[2,3]$  **with**  $n = 4$

**Find area under the curve using:**

Upper sum

Lower Sum

Midpoint Sum

Trapezoidal Sum

Actual Area