Scavenger Hunt

6.1/6.4

$$\int \left(2x^2 + 1\right) dx$$

$$\int_1^2 \left(1 - x^3\right) dx$$

Find the solution to the initial value problem

$$\frac{dy}{dx} = \frac{2x}{e^y} \qquad \mathrm{y}(1) = 0$$

$$\int \left(x^{2/3} + x^{5/2} \right) dx$$

$$\int_1^4 \sqrt{x}\,dx$$

$$\int \left(\sin x + \sec^2 x\right) dx$$

Find the solution to the initial value problem

$$\frac{dy}{dx} = y\left(1 + e^{x}\right) \qquad \mathrm{y}(2) = 1$$

$$\int \frac{1}{\sqrt[3]{x}}\,dx$$

$$\int_0^{\pi/2} \left(2\cos t - \sin t\right) dx$$

Find the solution to the initial value problem

$$\frac{dy}{dx} = \frac{4\sqrt{y}}{x} \qquad \mathrm{y(e)} = 1$$

$$\int \left(5\cos x + x^{-2}\right) dx$$

$$\int \left(3x^2 - \sin x + 2\sec^2 x\right) dx$$

Find the solution to the initial value problem

$$\frac{dy}{dx} = y^2 \sin x \qquad \mathrm{y}(0) = 2$$