$$1. \qquad \int \frac{e^x}{\sqrt{e^x}} \, dx$$

$$2. \qquad \int \sin^2(\pi x) \cos(\pi x) \, dx$$

3.
$$\int_0^{\pi/2} \frac{\cos(x)}{\sin(x) + 5} \, dx =$$

4. Find the area under the graph of $\sec^2(2x)$ between 0 and $\pi/8$.

1.
$$\int 12x^2 \sqrt{4x^3 + 15} \ dx$$

$$2. \qquad \int \frac{2x^9 - e^x}{x^{10} - 5e^x} \, dx$$

3.
$$\int_0^3 (x^2 - 4x + 1)^3 (2x - 4) dx =$$

4. Find the area under the graph of $x \sin(x^2)$ between 0 and $\sqrt{\pi/6}$.

1.
$$\int \sqrt{\sin(x)} \cos(x) dx$$

$$2. \qquad \int \frac{\sin(2x)}{\cos^5(2x)} \, dx$$

$$3. \qquad \int_0^{\sqrt{\pi/4}} \sec^2\left(x^2\right) x \, dx =$$

4. Find the area under the graph of $\frac{3}{3x+7}$ between -2 and 1.

$$1. \qquad \int \frac{\sec^2(-1/x)}{x^2} \ dx$$

$$2. \qquad \int 2e^{-x} \, dx$$

$$3. \qquad \int_{-1}^{0} \frac{x}{1+x^2} \, dx =$$

4. Find the area under the graph of $\frac{5}{(5x+1)^2}$ between 0 and 1.