Find the volume of the solid formed when the region bounded above by sin (x) and below by the x-axis, starting at the origin, is revolved about the y-axis.

$$\int x \ln(x)\,dx$$

$$\int \ln(x)\, dx$$

$$\int x^2 \cos(x)\, dx$$

$$\int \sin^{-1}(x)\,dx$$

That means arcsinx

$$\int e^x \sin(x)\, dx$$

$$\int x^2 \tan^{-1}(x)\,dx$$

$$\int xe^x dx$$

$$\int 4x\sec^2(2x)\,dx$$

$$\int_{1}^{4} \sec^{-1}\left(\sqrt{x}\right) dx$$

Also referred to as Arcsec

$$\int e^{-2x} \sin(2x)\, dx$$

Solve the following differential equation if $y = \frac{1}{2}$ when t=0

and $y = \frac{2}{3}$ when $t = 1$ $\frac{dy}{dt} = ky(1 - y)$

K is a constant of proportionality

$$\int \frac{x^3 dx}{\sqrt{1+x^2}}$$

$$\int \frac{dx}{x^2 + 7x + 10}$$

$$\int \frac{dx}{\left(x^2-4\right)\left(x+2\right)}$$

$$\int \frac{(x+3)\,dx}{(x+2)(x^2+1)}$$

$$\int \frac{dx}{x^4 + x^2}$$

$$\int \sin^5(x)\cos(x)\,dx$$

$$\int \tan^4(x)\,dx$$

$$\int \sin^2(x)\,dx$$

$$\int \sec^6(x)\,dx$$

$$\int \sec^3(x)\tan(x)\,dx$$

$$\int \sqrt{1-x^2}\,dx$$

$$\int \frac{dx}{\sqrt{x^2 - 16}}$$

$$\int_0^4 \frac{dx}{\sqrt{x^2+16}}$$

$$\int \sqrt{4 + x^2}\, dx$$

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

$$\int_{-1}^{1}\left(\frac{1}{9-x^{2}}\right)dx$$

$$\int \frac{1}{x} dx$$

$$u = \frac{1}{x} \text{ and } dv = dx$$

$$du = -\frac{1}{x^2} dx \text{ and } v = x$$

$$x \bullet \frac{1}{x} + \int \frac{1}{x} dx = 1 + \int \frac{1}{x} dx$$

So, 0=1