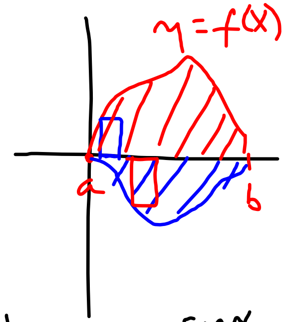
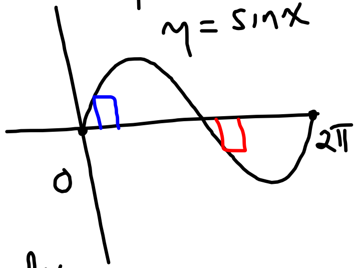
$$\int_a^b f(x)\,dx$$

Integrand

Bounds of integration



$$\int_0^{2\pi} \sin x\,dx = 0$$



$$\int_0^{\pi} \sin x\,dx + \int_{\pi}^{2\pi} |\sin x|\,dx$$

$$\int_0^{\pi} \sin x\,dx + \left| \int_{\pi}^{2\pi} \sin x\,dx \right|$$

$$\int_0^{2\pi} |\sin x|\,dx$$

$$\int_0^{\pi} \sin x\,dx - \int_{\pi}^{2\pi} \sin x\,dx$$

$$\int_0^{\pi} \sin x\,dx + \int_{2\pi}^{\pi} \sin x\,dx$$

$f(x)$	$f'(x)$
x^2	$2x$
$\frac{3x^2}{2} + C$	$3x$

{ an antiderivative of $2x$
x^2

$$\int 2x\,dx = x^2 + C$$

An Antiderivative of:

is

$2x$ $\quad$ x^2

$\cos x$ $\quad$ $\sin x$

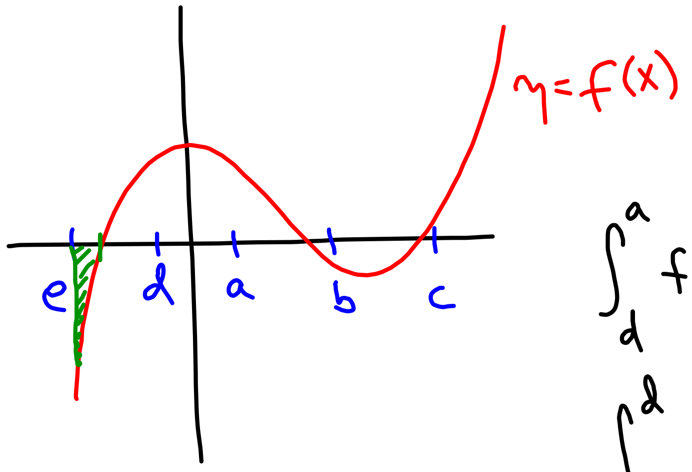
$\sin x$ $\quad$ $-\cos x$

is

The derivative of

$$\int \sin x \, dx = -\cos x + C$$

$$\int \sec^2 x \, dx = \tan x + C$$



$$\int_d^a f(x)\,dx > 0$$

$$\int_a^d f(x)\,dx < 0$$

$$\int_a^b g(x)\,dx = -\int_b^a g(x)\,dx$$

$$\int_a^c f(x)\,dx = \int_a^b f(x)\,dx + \int_b^c f(x)\,dx$$

$$\int_a^a f(x)\,dx = 0$$