

Application of Integral defined

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Centroide

Ingrese fx =

Ingrese gx =

Ingrese las rectas x =

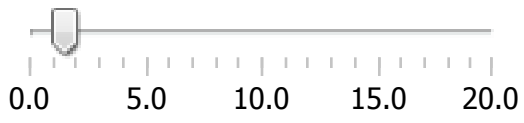
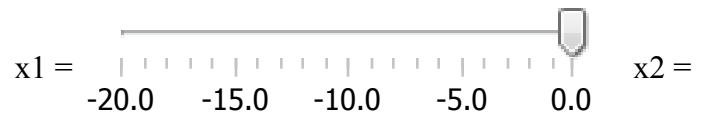
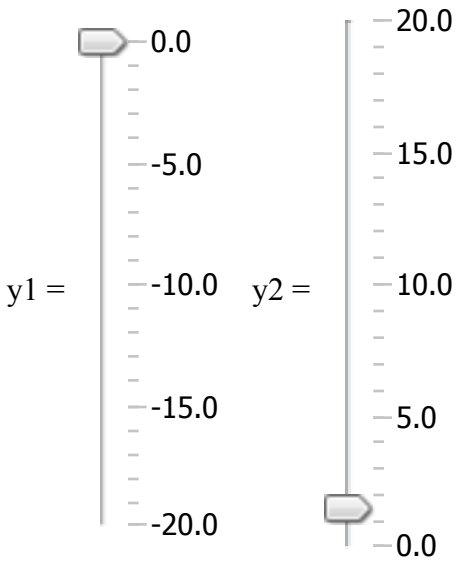
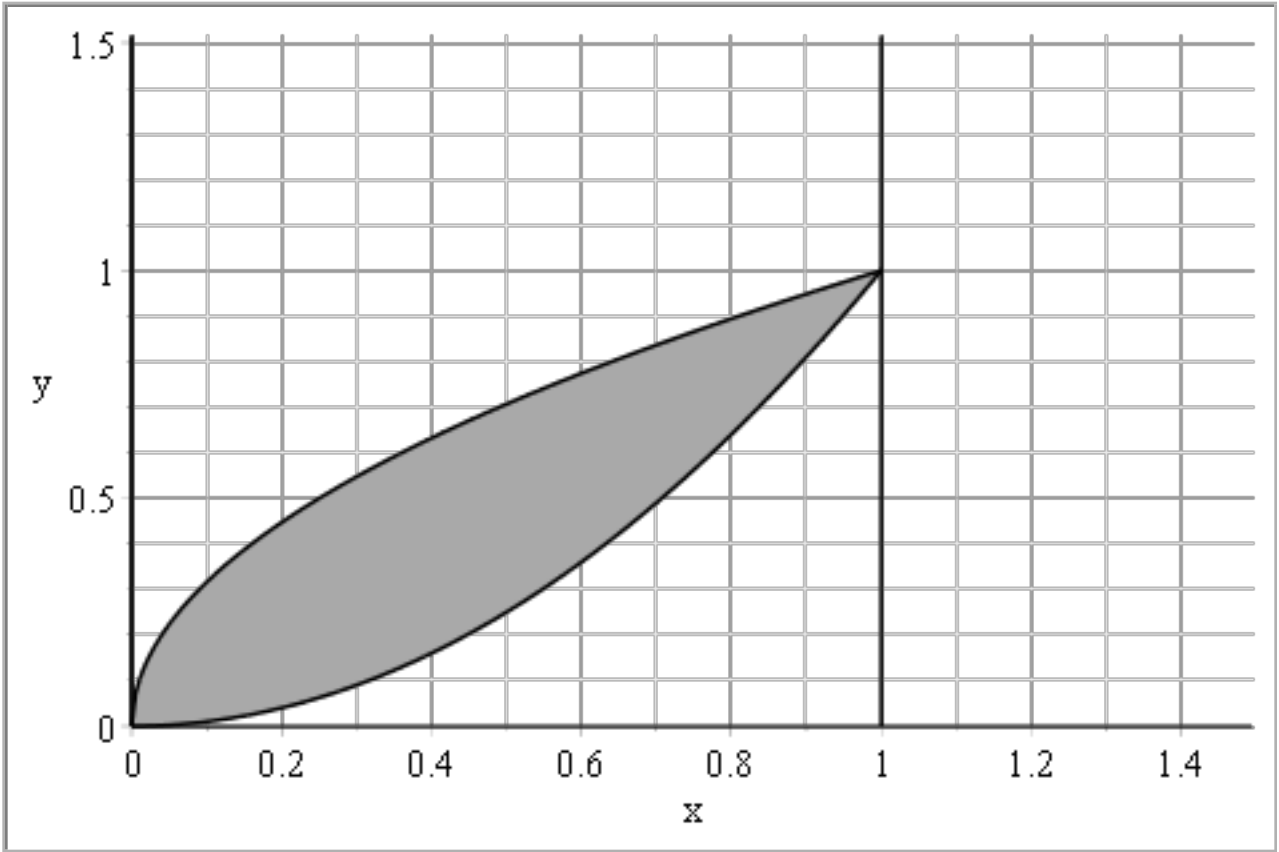
y x =

$$M_x := \frac{1}{2} \int_{\alpha}^{\beta} ((f(x))^2 - (g(x))^2) dx$$

$$M_y := \int_{\alpha}^{\beta} x \cdot (f(x) - g(x)) dx$$

$$A := \int_{\alpha}^{\beta} (f(x) - g(x)) dx \quad \text{Centroide: } x = \frac{M_y}{A} \quad y \quad y = \frac{M_x}{A}$$

Gráfica



M[x]

M[y]

A

Reset

$$\frac{1}{2} x - \frac{1}{2} x^4$$

Paso 1 =

$$-\frac{1}{2} \int_0^{1.0} (x^4 - x) dx = -\frac{1}{2} \int_0^{1.0} x^4 dx + \frac{1}{2} \int_0^{1.0} x dx$$

difference

Paso 2 =

$$-\frac{1}{2} \int_0^{1.0} (x^4 - x) dx = -0.1000000000 + \frac{1}{2} \int_0^{1.0} x dx$$

power

Paso 3 =

$$-\frac{1}{2} \int_0^{1.0} (x^4 - x) dx = 0.1500000000$$

power

Paso 4 =

constantmultiple

Paso 5 =

power

Paso 6 =

constantmultiple

Paso 7 =

power

x

= 0.4500000000

y

= 0.4500000000

Ojo: si faltó alguna regla; puedes insertarle.

Las integrales que no se pueden desarrollar deberá ucar este botón:

Calcular la integral

=

$$\int_0^{1.0} \sin(x)^2 dx = 0.2726756433$$

