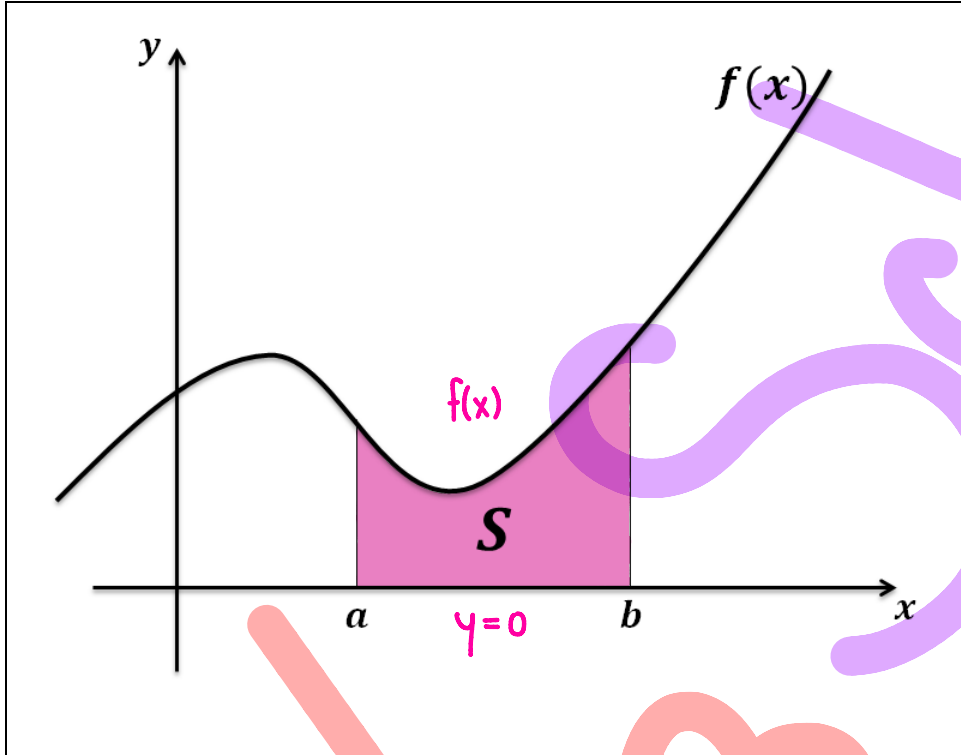


رياضيات - حساب التكامل

ايجاد مساحات بمساعدة تكاملات

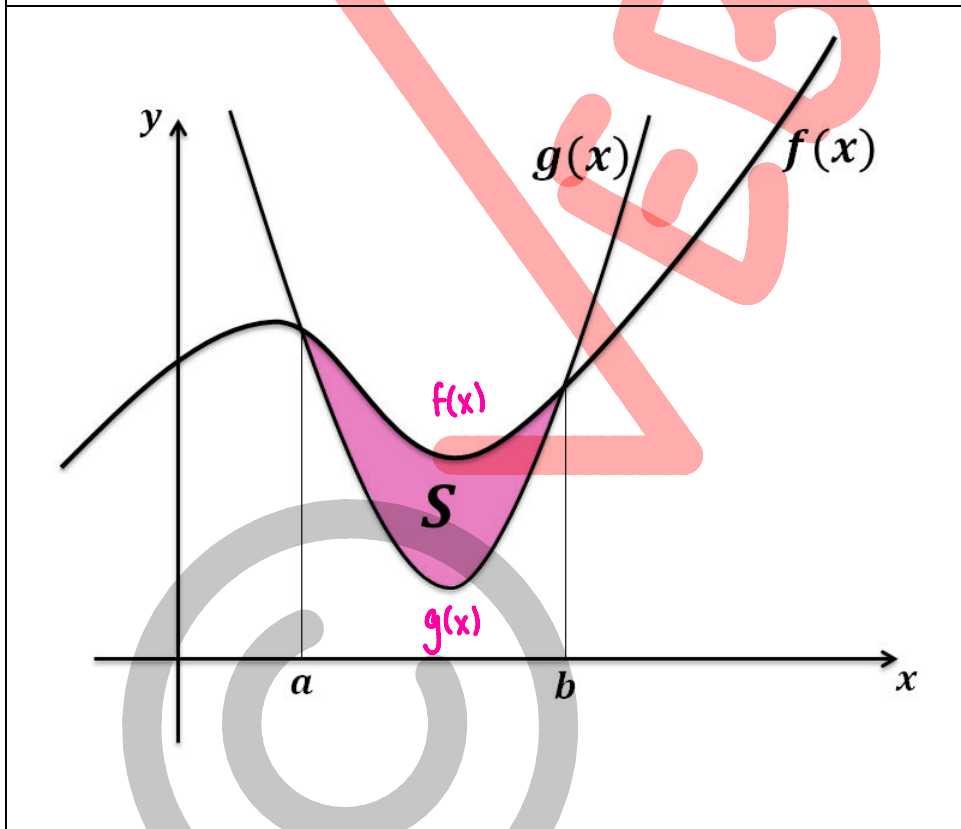
الهدف استخدامات حساب التكامل المحدود
هو لحساب مساحة بين دوال :

$$S = \int_{x=a}^{x=b} (\text{الدالة من الأعلى} - \text{الدالة من الأسفل}) dx$$

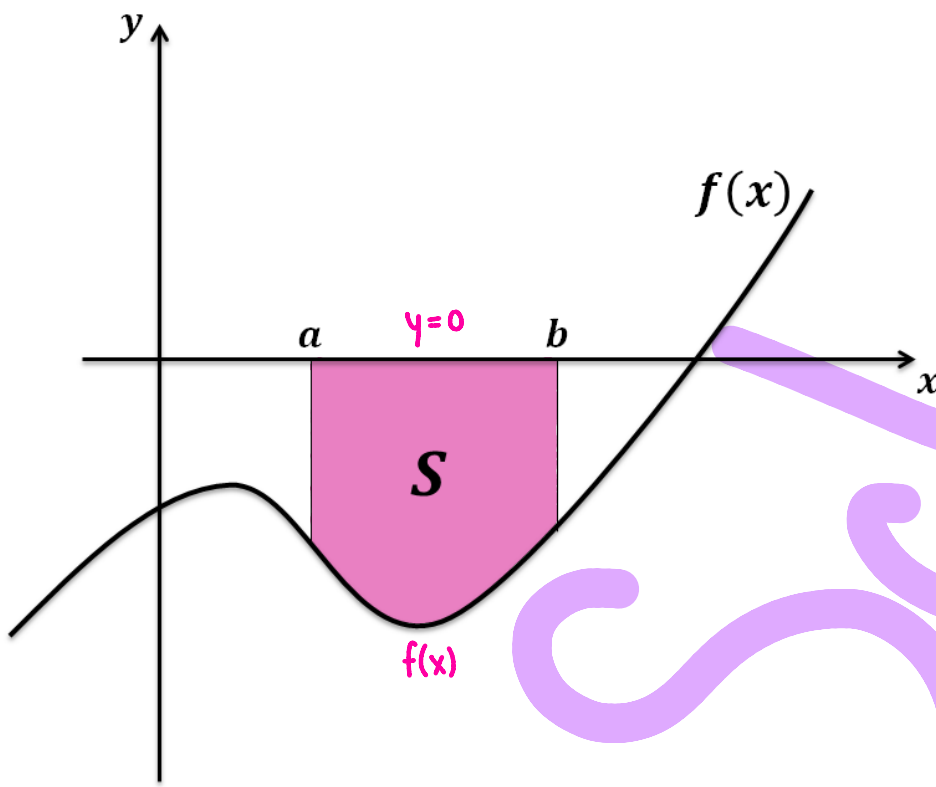


$$S = \int_a^b (f(x) - 0) dx$$

$$S = \int_a^b f(x) dx$$



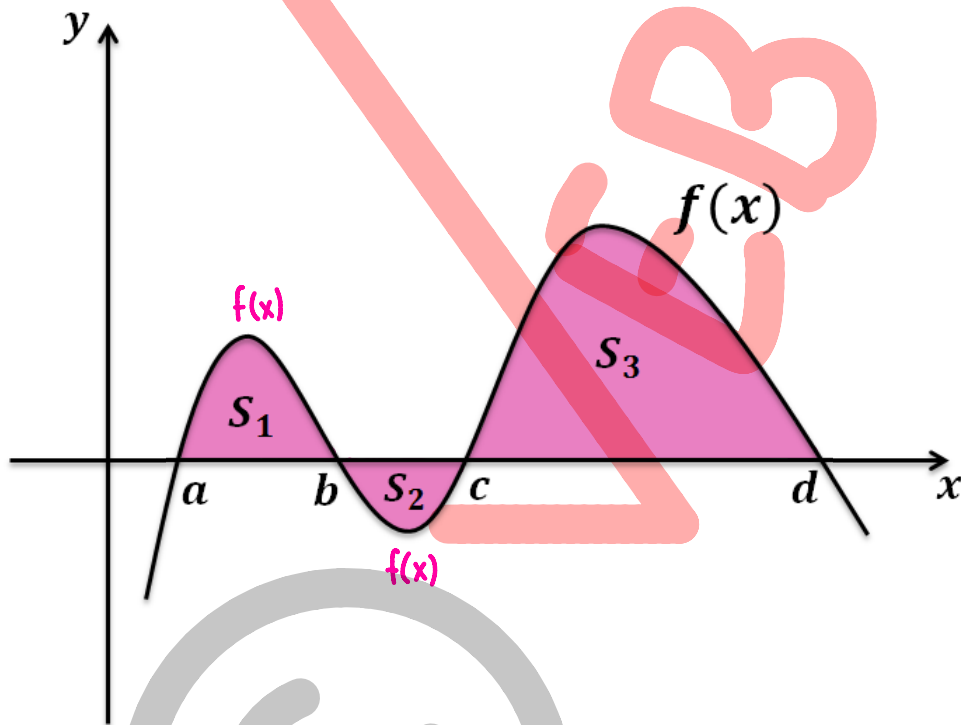
$$S = \int_a^b (f(x) - g(x)) dx$$



$$S = \int_a^b (0 - f(x)) dx$$

$$S = -\int_a^b f(x) dx$$

$$S = \left| \int_a^b f(x) dx \right|$$

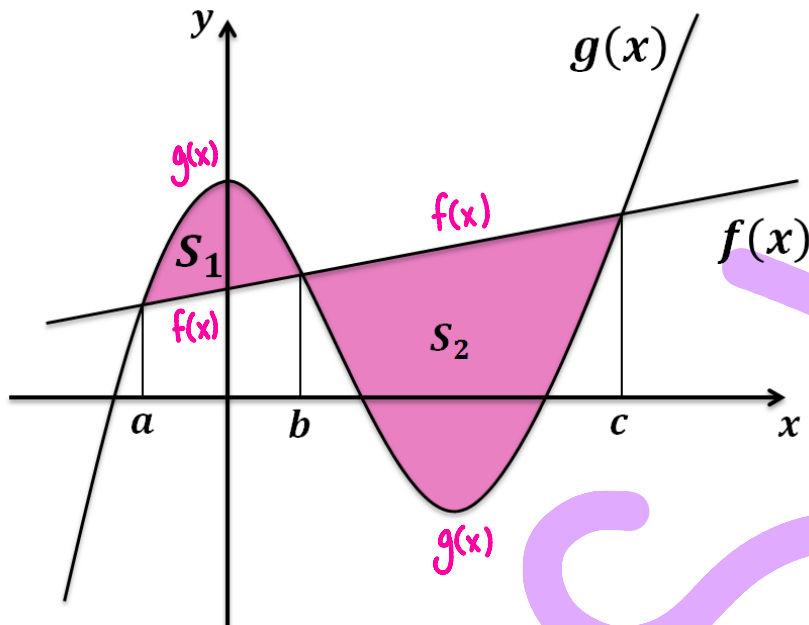


$$S_1 = \int_a^b f(x) dx$$

$$S_2 = -\int_b^c f(x) dx$$

$$S_3 = \int_c^d f(x) dx$$

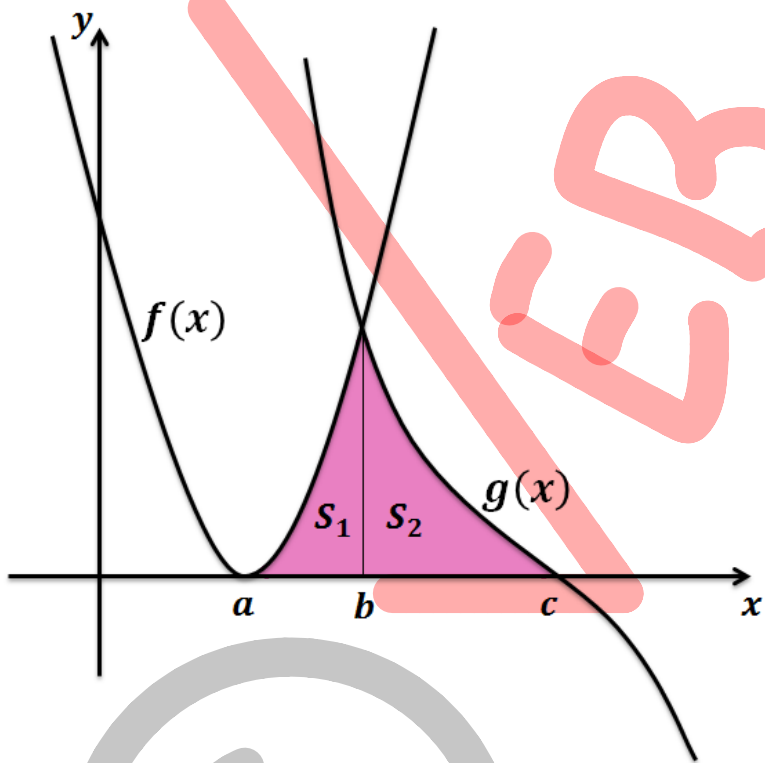
$$S = S_1 + S_2 + S_3$$



$$S_1 = \int_a^b (g(x) - f(x)) dx$$

$$S_2 = \int_b^c (f(x) - g(x)) dx$$

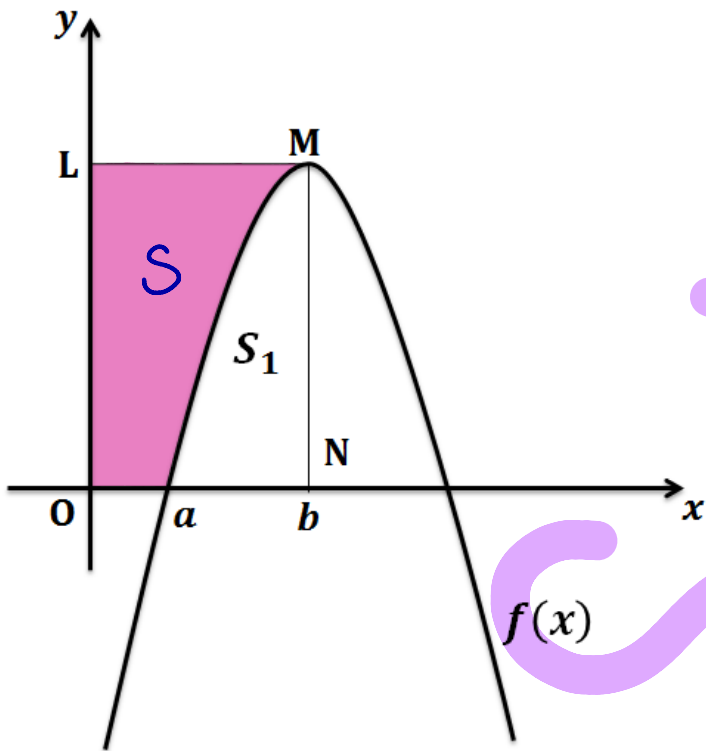
$$S = S_1 + S_2$$



$$S_1 = \int_a^b f(x) dx$$

$$S_2 = \int_b^c g(x) dx$$

$$S = S_1 + S_2$$



$$S_1 = \int_a^b f(x) dx$$

$$S_{LMNO} = LO \cdot ON$$

$$S = S_{LMNO} - S_1$$