



### Ejercicio 24

**24** Dada  $f(x) = x + 1$ , halla:

a)  $\int_0^x f$       b)  $\int_1^x f$       c)  $\int_{-1}^x f$       d)  $\int_1^3 f$

**Resolución**

$$G(x) = \int (x + 1) dx = \frac{x^2}{2} + x$$

$$G(0) = 0; \quad G(1) = \frac{3}{2}; \quad G(-1) = -\frac{1}{2}; \quad G(3) = \frac{15}{2}$$

$$a) \int_0^x f = G(x) - G(0) = \frac{x^2}{2} + x$$

$$b) \int_1^x f = G(x) - G(1) = \frac{x^2}{2} + x - \frac{3}{2}$$

$$c) \int_{-1}^x f = G(x) - G(-1) = \frac{x^2}{2} + x + \frac{1}{2}$$

$$d) \int_1^3 f = G(3) - G(1) = \frac{15}{2} - \frac{3}{2} = \frac{12}{2} = 6$$