

The indefinite integral

The definite integral

integrand

definite and indefinite integrals

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The Fundamental Theorem of Calculus

definite and indefinite integral

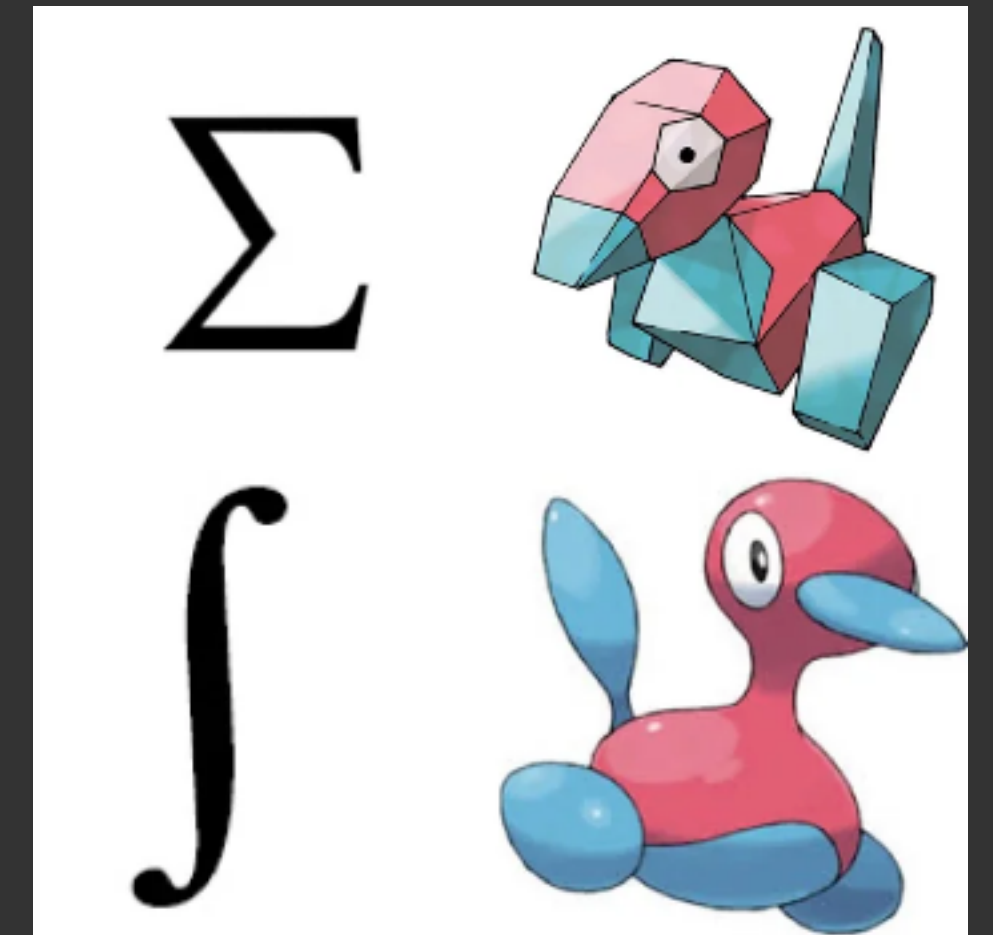
The **indefinite integral** of $f(x)$ with respect to x , written as

$$\int f(x)dx = F(x) + c \quad F'(x) = f(x)$$

The **definite integral** of $f(x)$ between limits a and b with respect to x , written as

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

where $f(x)$ is called the **integrand**



The Fundamental Theorem of Calculus shows that differentiation and integration are inverse processes in two parts based on indefinite and definite integrals

definite and indefinite integral

