

$$\begin{array}{l}
 a \times 0 = 0 \quad \frac{4}{4} P \quad (z \equiv x) \quad \vdash \frac{1}{8} S(2p, 3) \quad a \times 0 = 0 \quad \frac{4}{4} P \quad (z \equiv x) \quad \vdash \frac{1}{8} S(2p, 3) \\
 x) \quad (b+1) > \cos\left[\frac{3\pi}{14}\right] \quad ab=ba \quad \vdash \frac{1}{8} S(2p, x) \quad (b+1) > \cos\left[\frac{3\pi}{14}\right] \quad ab=ba \quad \vdash \frac{1}{8} S(2p, x) \\
 c \int \frac{x}{\sqrt{1-x^3}} \quad x + \cos \quad a \times b \times c = (a \times b) \times c \quad \int \frac{x}{\sqrt{1-x^3}} \quad x + \cos \quad a \times b \times c = (a \times b) \times c \\
 \log[1-x] \left(\frac{1-x^{1/2}}{1+x^{1/2}}\right)^2 (x + \sin(\frac{\pi}{14})) \quad \log[1-x] \left(\frac{1-x^{1/2}}{1+x^{1/2}}\right)^2 (x + \sin(\frac{\pi}{14})) \\
 a \times bc(b+c) \quad (1-x^y) \sum_{i=2}^N \% \quad a \times bc(b+c) \quad (1-x^y) \sum_{i=2}^N \% \\
 3 > -4 \left\{ \frac{xx+yy}{xy} a^4 ? \frac{5}{4} \cdot \frac{9}{4} \right. \quad 3 > -4 \left\{ \frac{xx+yy}{xy} a^4 ? \frac{5}{4} \cdot \frac{9}{4} \right. \\
 \frac{1}{2} \infty * \left\{ \frac{xy}{\sin[\frac{\pi}{14}]} \div \sqrt{2} \right. \quad \frac{1}{2} \infty * \left\{ \frac{xy}{\sin[\frac{\pi}{14}]} \div \sqrt{2} \right. \\
 \sqrt{\frac{1}{3}} ab \quad SH \supset P \quad MS^{(1)} \quad \frac{ab}{7^a + 3^b} \quad \sqrt{\frac{1}{3}} ab \quad SH \supset P \quad MS^{(1)} \quad \frac{ab}{7^a + 3^b} \\
 a \times 0 = 0 \quad \frac{4n-3}{4} P \quad (z \equiv x) \quad \vdash \frac{1}{8} S(2p, 3) \quad a \times 0 = 0 \quad \frac{4n-3}{4} P \quad (z \equiv x) \quad \vdash \frac{1}{8} S(2p, 3) \\
 x) \quad (b+1) > \cos\left[\frac{3\pi}{14}\right] \quad ab=ba \quad \vdash \frac{1}{8} S(2p, x) \quad (b+1) > \cos\left[\frac{3\pi}{14}\right] \quad ab=ba \quad \vdash \frac{1}{8} S(2p, x) \\
 c \int \frac{x}{\sqrt{1-x^3}} \quad x + \cos \quad a \times b \times c = (a \times b) \times c \quad \int \frac{x}{\sqrt{1-x^3}} \quad x + \cos \quad a \times b \times c = (a \times b) \times c \\
 \log[1-x] \left(\frac{1-x^{1/2}}{1+x^{1/2}}\right)^2 (x + \sin(\frac{\pi}{14})) \quad \log[1-x] \left(\frac{1-x^{1/2}}{1+x^{1/2}}\right)^2 (x + \sin(\frac{\pi}{14})) \\
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 \sqrt{\frac{1}{3}} ab \quad SH \supset P \quad MS^{(1)} \quad \frac{ab}{7^a + 3^b} \quad \sqrt{\frac{1}{3}} ab \quad SH \supset P \quad MS^{(1)} \quad \frac{ab}{7^a + 3^b}
 \end{array}$$

# Lenguaje matemático

Josep Miquel Porcar

# Sumatorio

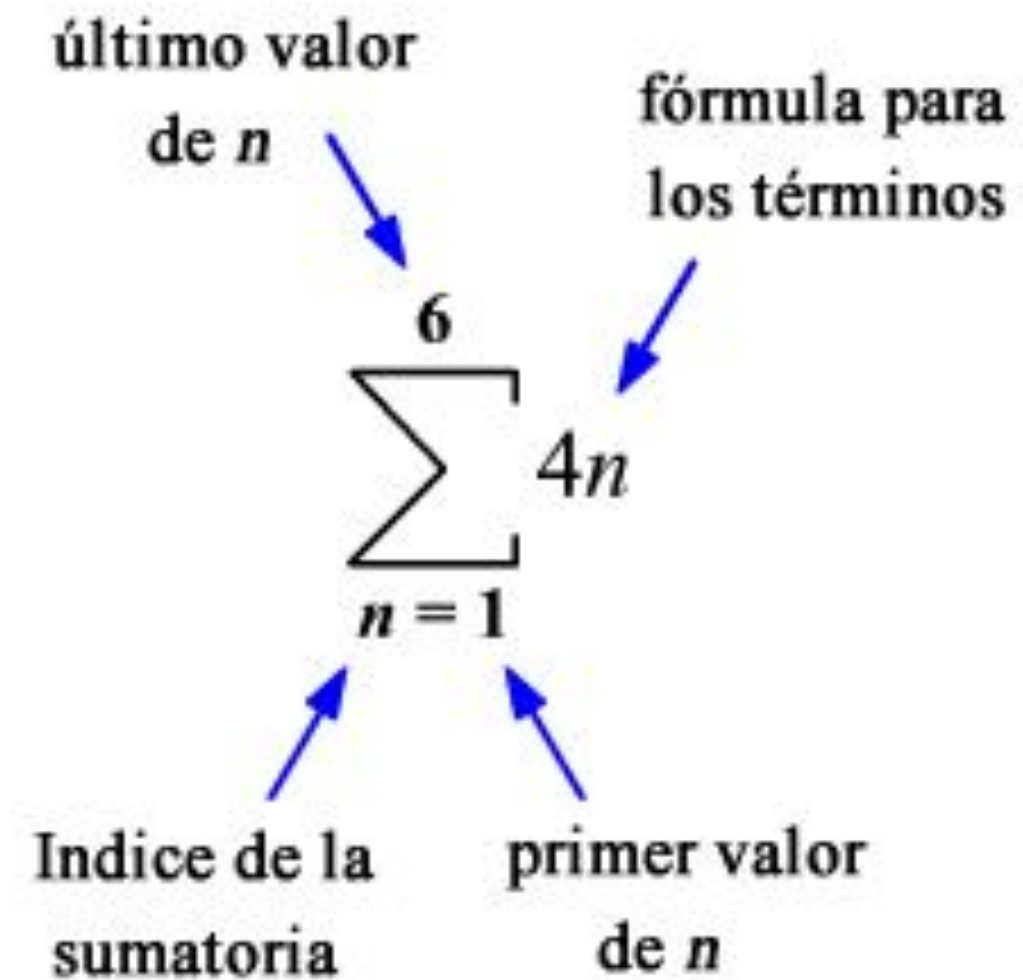


Diagram illustrating the components of a summation formula:

$$\sum_{n=1}^6 4n$$

The diagram includes the following labels and arrows:

- último valor de  $n$** : Points to the upper limit  $6$ .
- fórmula para los términos**: Points to the term  $4n$ .
- Indice de la sumatoria**: Points to the lower limit  $n = 1$ .
- primer valor de  $n$** : Points to the lower limit  $n = 1$ .

[Ejercicios sumatorio](#)

# Media y desviación estándar

## Media aritmética

$$\bar{x} = \frac{1}{N} \sum_{i=1}^N x_i$$
$$= \frac{x_1 + x_2 + \dots + x_N}{N}$$

## Desviación estándar muestral

$$s = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n - 1}}$$

$$s = \sqrt{\frac{(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \dots + (x_n - \bar{x})^2}{n - 1}}$$

## Desviación media

$$D_{\bar{x}} = \frac{\sum_{i=1}^N |x_i - \bar{x}|}{N}$$

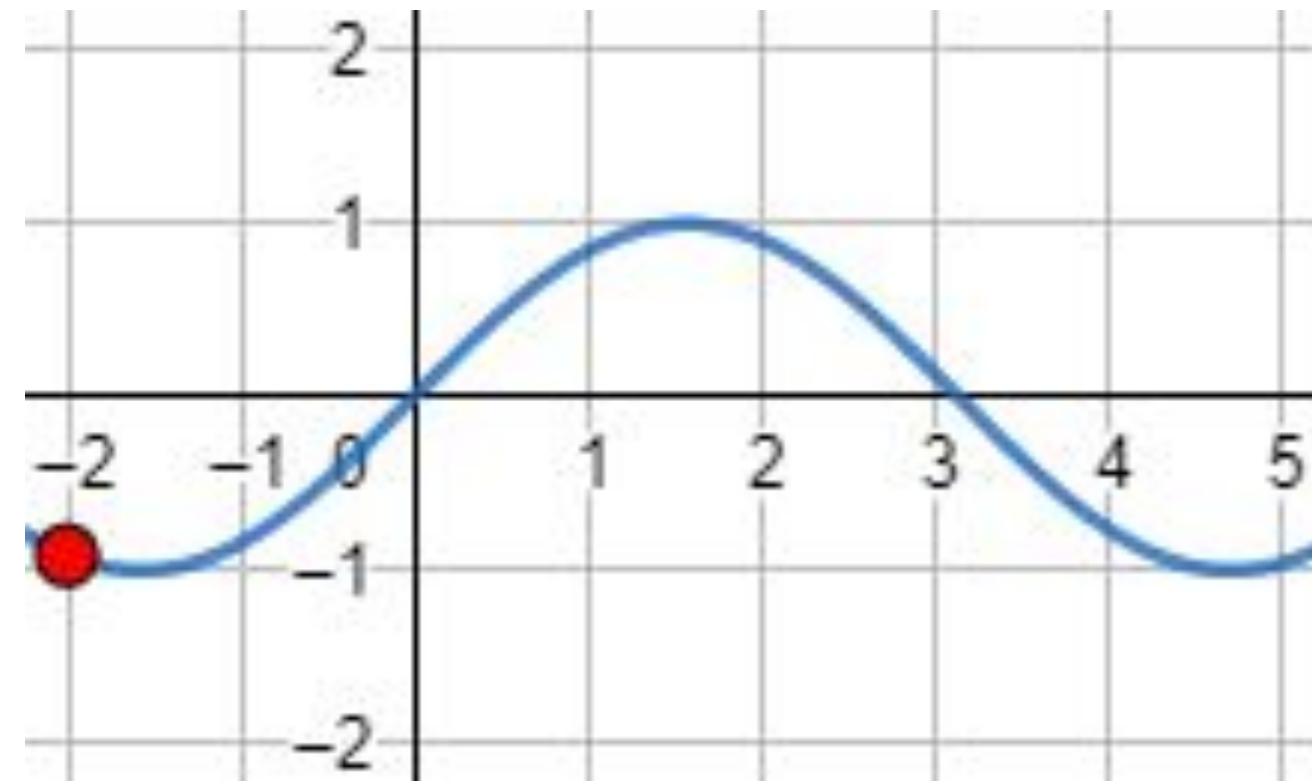
$$D_{\bar{x}} = \frac{|x_1 - \bar{x}| + |x_2 - \bar{x}| + \dots + |x_N - \bar{x}|}{N}$$

[Ejercicios media](#)

# Funciones

$$f(x) = \pm x^2 \rightarrow \text{función}$$

$$y = \pm x^2 \rightarrow \text{ecuación}$$

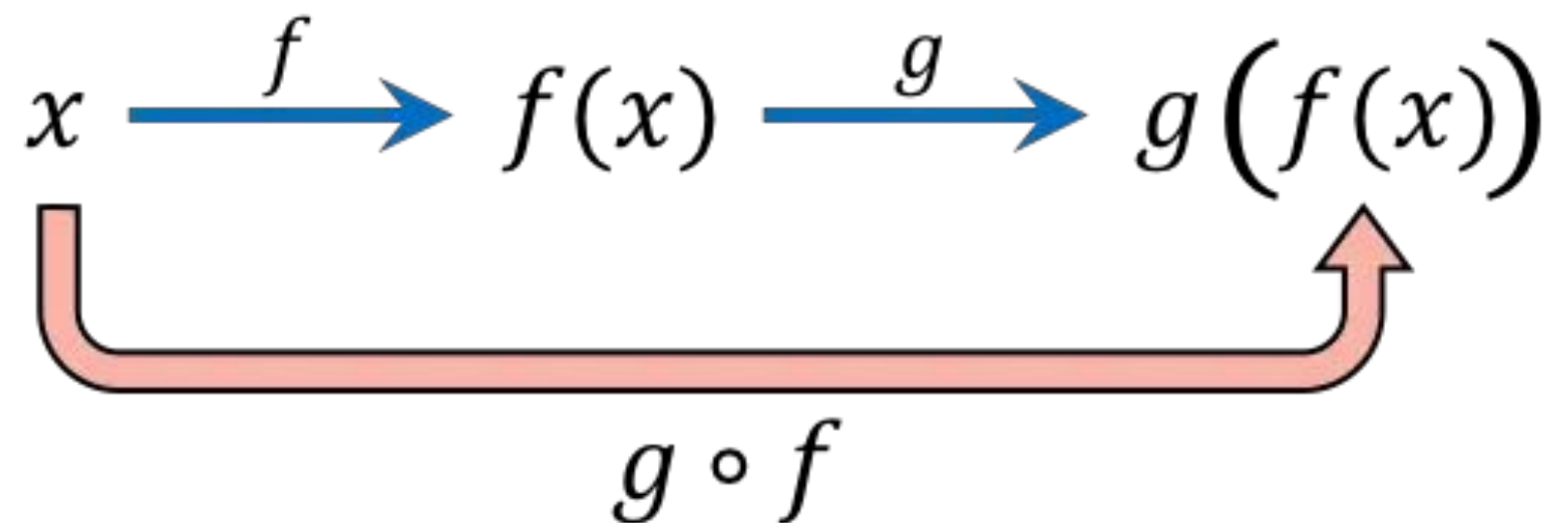


Se define  $f \pm g$ ,  $f \cdot g$ ,  $\frac{f}{g}$  como

$$(f \pm g)(x) = f(x) \pm g(x)$$

$$(f \cdot g)(x) = f(x) \cdot g(x)$$

$$\left(\frac{f}{g}\right)(x) = \frac{f(x)}{g(x)}, \text{ para } g(x) \neq 0$$



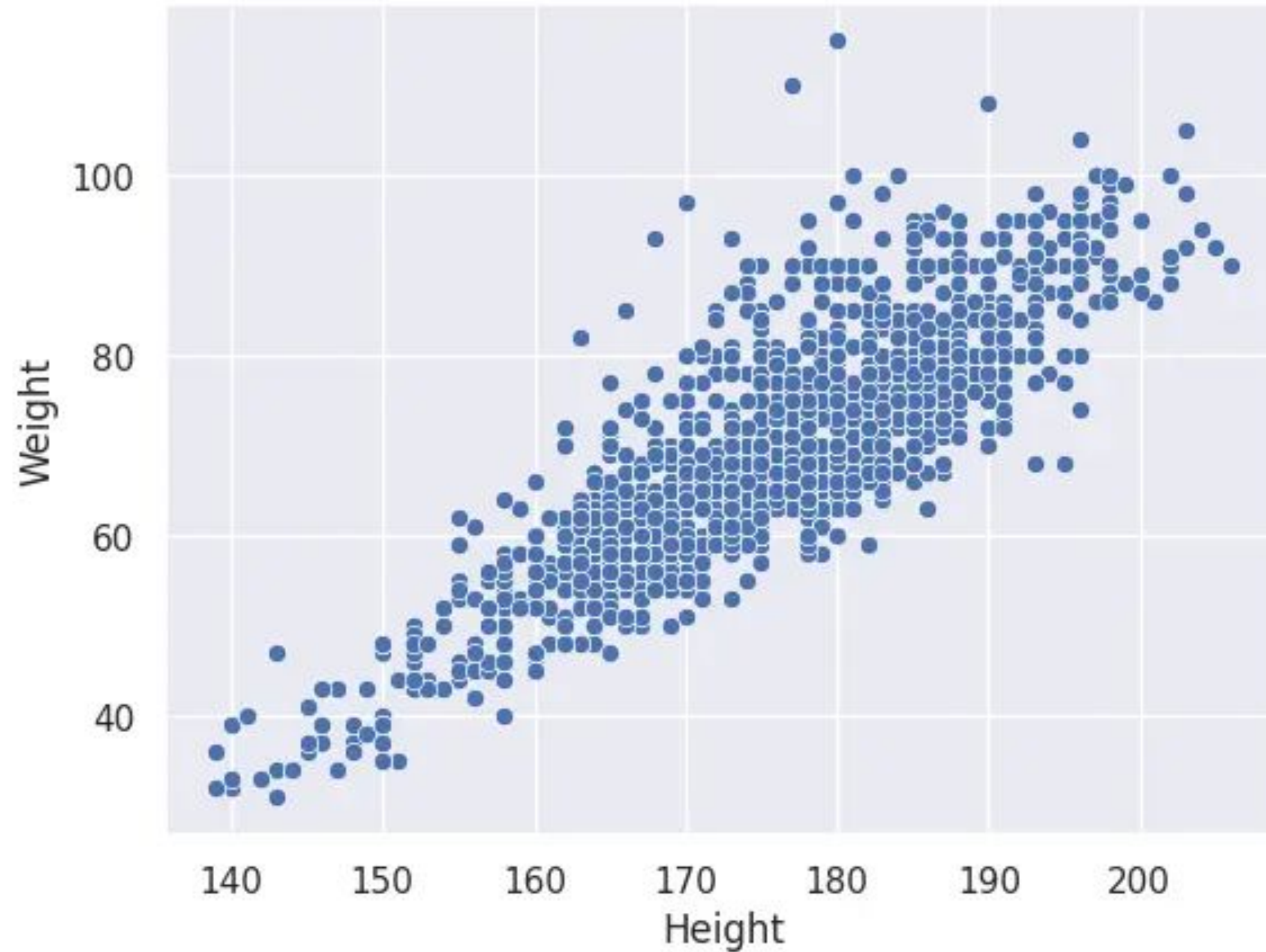
# Funciones

[Ejercicios derivadas](#)

[Ejercicios derivadas parciales](#)



# Gráficos



[Ejercicios interpretación](#)

# Vectores

$$\vec{\mathbf{a}} = (a_x, a_y, a_z)$$

<https://es.wikipedia.org/wiki/Vector>

[Ejercicios vectores](#)