## Ejercicio 6

## Daniel Rodríguez

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Muchas matemáticas para practicar y practicar.

$$\int_{a}^{b} x \, dx = \left. \frac{x^2}{2} \right|_{a}^{b} \tag{1}$$

$$\iiint_{V} f(x, y, z) dV = F$$
 (2)

$$\frac{dx}{dy} = xt = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h} \tag{3}$$

$$|x| = \begin{cases} -x, & \text{si } x < 0\\ x, & \text{si } x \ge 0 \end{cases} \tag{4}$$

$$F(x) = A_0 + \sum_{n=1}^{N} \left[ A_n \cos\left(\frac{2\pi nx}{P}\right) + B_n \sin\left(\frac{2\pi nx}{P}\right) \right]$$
 (5)

$$\sum_{n} \frac{1}{n^s} = \prod_{p} \frac{1}{1 - \frac{1}{p^s}} \tag{6}$$

$$m\ddot{x} + c\dot{x} + kx = F_0 \sin(2\pi f t) \tag{7}$$

$$f(x) = x^{2} + 3x + 5x^{2} + 8 + 6x$$

$$= 6x^{2} + 9x + 8$$

$$= x(6x + 9) + 8$$
(8)

$$X = \frac{F_0}{k} \frac{1}{\sqrt{(1-r^2) + (2\zeta r)^2}} \tag{9}$$

$$G_{\mu\nu} \equiv R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} = \frac{8\pi G}{c^4}T_{\mu\nu}$$
 (10)

$$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$$
 (11)

$$SO_4^{2-} + Ba^{2+} \rightarrow BaSO_4 \tag{12}$$

$$\begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{pmatrix} \begin{pmatrix} v_1 \\ v_2 \\ \vdots \\ v_n \end{pmatrix} = \begin{pmatrix} w_1 \\ w_2 \\ \vdots \\ w_n \end{pmatrix}$$
(13)

$$\frac{\partial \mathbf{u}}{\partial t} + (\mathbf{u} \cdot \nabla)\mathbf{u} - \nu \nabla^2(\mathbf{u}) = -\nabla \mathbf{h}$$
 (14)

$$\alpha A\beta B\gamma \Gamma \delta \Delta \pi \Pi \omega \Omega \tag{15}$$