L'equació cúbica $x^3 + 3px + 2q = 0$ té una arrel real i dues arrels complexes si el discriminant $\Delta = q^2 + p^3 > 0$. Aquestes solucions venen donades per les fórmules següents, conegudes com les *fórmules de Cardano*.

$$x_1 = u + v, \quad x_2 = -\frac{u+v}{2} + \frac{i}{2}\sqrt{3}(u-v), \quad x_3 = -\frac{u+v}{2} - \frac{i}{2}\sqrt{3}(u-v),$$

on:

$$u = \sqrt[3]{-q + \sqrt{\Delta}}, \quad v = \sqrt[3]{-q - \sqrt{\Delta}}.$$

$$ab \equiv 1 \pmod{n}$$

$$\psi(p_1^{t_1}), \psi(p_2^{t_2}), \ldots, \psi(p_m^{t_m})$$

$$b^m \alpha = (a_n a_{n-1} \ldots a_2 a_1 \cdot \overline{c_1 c_2 \ldots c_r})_b$$

$$\left| \frac{f(z) - f(z_j)}{z - z_j} - f'(z_j) \right| < \varepsilon, \quad j = 1, 2, \ldots, n$$

$$E\psi = -\frac{h^2}{2m}\frac{d^2\psi}{dx^2} + \frac{1}{2}kx^2\psi$$

$$F(x) = \frac{1}{\Gamma(\alpha)\beta^\alpha} x^{\alpha-1} e^{-x/\beta}, \quad 0 < x < \infty$$

$$\Pr(R = 2k) = \frac{2\binom{m-1}{k-1}\binom{n-1}{k-1}}{\binom{m+n}{n}}$$

$$I_2 = \int_{c_2} z^2\, dz = \int_{OA} z^2\, dz + \int_{AB} z^2\, dz$$

$$F(z+\Delta z)-F(z)=\int_{z_0}^{z+\Delta z} f(s)\,ds-\int_{z_0}^{z} f(s)\,ds$$

$$G(y)=\int_0^{\sqrt{y}}\int_0^{2\pi}\int_0^{\pi}\frac{1}{(2\pi)^{3/2}}e^{-\rho^2/2}\rho^2\sin\varphi\,d\varphi\,d\theta\,d\rho$$

$$\begin{aligned} M(t;n) &= E\left[\exp\left(t\frac{\Sigma X_i-n\mu}{\sigma\sqrt{n}}\right)\right] \\ &= \left[m\left(\frac{t}{\sigma\sqrt{n}}\right)\right]^n, \qquad -h<\frac{t}{\sigma\sqrt{n}}<h \end{aligned}$$

$$f(x)=\begin{cases}\frac{m^x e^{-m}}{x!}, & x=0,1,2,\ldots; \\ 0, & \text{en cas contrari.}\end{cases}$$

$$J=\begin{vmatrix}\frac{\partial x_1}{\partial y_1} & \frac{\partial x_1}{\partial y_2} \\ \frac{\partial x_2}{\partial y_1} & \frac{\partial x_2}{\partial y_2}\end{vmatrix}=\begin{vmatrix}\frac{1}{2} & \frac{1}{2} \\ \frac{1}{2} & -\frac{1}{2}\end{vmatrix}=-\frac{1}{2}$$

$$\nabla\otimes F=\frac{1}{r^2\sin\varphi}\begin{vmatrix}u_r & ru_\varphi & r\sin\varphi u_\theta \\ \frac{\partial}{\partial r} & \frac{\partial}{\partial\varphi} & \frac{\partial}{\partial\theta} \\ F_r & rF_\varphi & r\sin\varphi F_\theta\end{vmatrix}$$

$$Q=\iiint_{\mathcal{R}}\kappa\nabla^2\tau\,d\tau$$

$$H_2SeO_3+6I^-+4H^+=Se(s)+2I^-+3H_2O$$

$$\mathrm{H_2SeO_3}+6\mathrm{I}^-+4\mathrm{H}^+=\mathrm{Se}(s)+2\mathrm{I}^-+3\mathrm{H_2O}$$

$$
\begin{array}{ccc}
N_2O_3 \longrightarrow & N_2O_4 + O_2 \\
& \Updownarrow \\
& 2NO_2
\end{array}
$$

$$\lim_{x \to 0} \frac{\ln \sin \pi x}{\ln \sin x} = \lim_{x \to 0} \frac{\pi \frac{\cos \pi x}{\sin \pi x}}{\frac{\cos x}{\sin x}} = \lim_{x \to 0} \frac{\pi \tan x}{\tan \pi x} = \lim_{x \to 0} \frac{\pi / \cos^2 x}{\pi / \cos^2 \pi x} = \lim_{x \to 0} \frac{\cos^2 \pi x}{\cos^2 x} = 1$$

$$\Gamma(x) = \lim_{n \to \infty} \prod_{\nu=0}^{n-1} \frac{n! n^{x-1}}{x+\nu} = \lim_{n \to \infty} \frac{n! n^{x-1}}{x(x+1)(x+2)\cdots(x+n-1)} \equiv \int_0^\infty e^{-t} t^{x-1} \, dt$$

$$f_c = 0.08 N_{Re}^{-0.25} + 0.01 \frac{D}{D_c}^{0.5}$$

$$\frac{d_p^3 \rho_c^2 g}{\mu_c^2} = 29.0 \left(\frac{p^3 g_c^3}{v^3 \rho_c^2 \mu_c g^4} \right)^{-0.32} \left(\frac{\rho_c \sigma^3 g_c^3}{\mu_c^4 g} \right)^{0.14}$$

$$\left[\frac{1}{a} \ln \frac{\Delta t}{a + b\Delta t} \right]_{\Delta t_1}^{\Delta t_2} = \frac{1}{a} \ln \frac{U_{01} \Delta t_2}{U_{02} \Delta t_1}$$