$p^n\,p^m = p^{n+m}$ $\quad \frac{p^n}{p^m} = p^{n-m} = \frac{1}{p^{m-n}}$ $\quad |a\,b| = |a|\;|b|$

$(p^n)^m = p^{n\,m}$ $\quad p^0 = 1,\ p \neq 0$ $\quad \left|\frac{a}{b}\right| = \frac{|a|}{|b|}$

$(p\,q)^n = p^n\,q^n$ $\quad \left(\frac{p}{q}\right)^n = \frac{p^n}{q^n}$ $\quad |a+b| \leq |a| + |b|$

$p^{-n} = \frac{1}{p^n}$ $\quad \frac{1}{p^{-n}} = p^n$ $\quad \sqrt[n]{x\,y} = \sqrt[n]{x}\,\sqrt[n]{y}$

$\left(\frac{p}{q}\right)^{-n} = \left(\frac{q}{p}\right)^n = \frac{q^n}{p^n}$ $\quad \frac{a}{-b} = \frac{-a}{b} = -\frac{a}{b}$ $\quad \sqrt[n]{\frac{x}{y}} = \frac{\sqrt[n]{x}}{\sqrt[n]{y}}$

$(a+b)\,(a-b) = a^2 - b^2$ $\quad (a+b)^2 = a^2 + 2\,a\,b + b^2$

$(a-b)^2 = a^2 - 2\,a\,b + b^2$ $\quad a^3 - b^3 = (a-b)\left(a^2 + a\,b + b^2\right)$

$\left(a^3 + b^3\right) = (a+b)\left(a^2 - a\,b + b^2\right)$ $\quad x = \frac{-b \pm \sqrt{b^2 - 4\,a\,c}}{2\,a}$

$\log_b b = 1$ $\quad \log_b 1 = 0$ $\quad \log_b b^x = x$

$b^{\log_b x} = x$ $\quad \log_b x\,y = \log_b x + \log_b y$ $\quad \log_b \frac{x}{y} = \log_b x - \log_b y$

$\log_b x^r = r \log_b x$ $\quad \log_b x = \frac{\log_a x}{\log_a b}$ $\quad \log_b x = \frac{\ln x}{\ln b}$

$\log_b x = \frac{\log x}{\log b}$ $\quad \log_b x = n \Rightarrow b^n = x$ $\quad y = \log_b x \Rightarrow x > 0$

Complete the square. $a\,x^2 + b\,x + c = 0$ to $a(x+d)^2 + e = 0$.

Fica apenas um x e uma constante adicional.

- $x^2 + 6\,x + 7 = (x+3)^2 + e = (x+3)^2 - 2$.

$(x+3)^2 = x^2 + 6\,x + 9 - (x^2 + 6\,x + 7) = 2$.

- $x^2 - x + 1 = \left(x - \frac{1}{2}\right)^2 + e = \left(x - \frac{1}{2}\right)^2 + \frac{3}{4}$. Cuidado com o sinal. Somamos a diferença.

$(x-1)^2 = x^2 - 2\,x + 1 - (x^2 - x + 1) = -x$. Não.

$\left(x - \frac{1}{2}\right)^2 = x^2 - x + \frac{1}{4} - (x^2 - x + 1) = -\frac{3}{4}$.