PROPRIEDADES POTENCIAÇÃO

- $a^0 = 1$

- $a^1 = a$

- $a^m \cdot a^n = a^{m+n}$

- $\dfrac{a^m}{a^n} = a^{m-n}$

- $(a^m)^n = a^{m \cdot n}$

- $(a \cdot b)^n = a^n \cdot b^n$

- $\left(\dfrac{a}{b}\right)^n = \dfrac{a^n}{b^n}$

- $\left(\dfrac{a}{b}\right)^{-n} = \left(\dfrac{b}{a}\right)^n$

- $a^{-n} = \dfrac{1}{a^n}$

- $a^{\frac{m}{n}} = \sqrt[n]{a^m}$

- $-a^n = -(a^n) \neq (-a)^n$

PROPRIEDADES RADICIAÇÃO

- $\sqrt[n]{a^m} = \left(\sqrt[n]{a}\right)^m = a^{\frac{m}{n}}$

- $\sqrt[n]{1} = 1$

- $\sqrt[m]{\sqrt[n]{a}} = \sqrt[m \cdot n]{a}$

- $a^{-\frac{m}{n}} = \dfrac{1}{\sqrt[n]{a^m}}$

- $\sqrt[n]{a^m} = \sqrt[n \div p]{a^{m \div p}}$

- $\sqrt[n]{a \cdot b} = \sqrt[n]{a} \cdot \sqrt[n]{b}$

- $\sqrt[n]{\dfrac{a}{b}} = \dfrac{\sqrt[n]{a}}{\sqrt[n]{b}}$

PROPRIEDADES LOGARITMO

- $\log_a b = x \iff a^x = b$

- $\log_a 1 = 0$

- $\log_a a^n = n$

- $a^{\log_a b} = b$

- $\log_a (b \cdot c) = \log_a b + \log_a c$

- $\log_a \left(\dfrac{b}{c}\right) = \log_a b - \log_a c$

- $\log_a x = \log_a y \iff x = y$

- $\log_a b^c = c \cdot \log_a b$

- $\log_b a = \dfrac{\log_c a}{\log_c b}$

- $\log_{a^x} b = \dfrac{1}{x} \log_a b$

- $\log_a b \cdot \log_b a = 1$

- $\log_a b = \dfrac{1}{\log_b a}$

TRIGONOMETRIA

- $S = \dfrac{O}{H}$

- $C = \dfrac{A}{H}$

- $T = \dfrac{O}{A}$

- $tg(\alpha) = \dfrac{sen(\alpha)}{cos(\alpha)}$

- $cos^2(\alpha) + sen^2(\alpha) = 1$

- $\dfrac{a}{sen\,\hat{A}} = \dfrac{b}{sen\,\hat{B}} = \dfrac{c}{sen\,\hat{C}}$

- $a^2 = b^2 + c^2 - 2bc \cdot cos\,\hat{A}$

- $180° = \pi\,rad$

	30°	45°	60°
sen	$\dfrac{1}{2}$	$\dfrac{\sqrt{2}}{2}$	$\dfrac{\sqrt{3}}{2}$
cos	$\dfrac{\sqrt{3}}{2}$	$\dfrac{\sqrt{2}}{2}$	$\dfrac{1}{2}$
tg	$\dfrac{\sqrt{3}}{3}$	1	$\sqrt{3}$

CÍRCULO

- $a = r \cdot \theta$
- $P = 2\pi r$
- $A = \pi \cdot r^2$

FUNÇÕES

- $ax + by + c = 0$

- $a = \dfrac{\Delta y}{\Delta x}$

- $(f \circ g)(x) = (f(g(x))$

- $f(x) = ax^2 + bx + c$

- $x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

- $x_1 + x_2 = -b/a$
  $x_1 \cdot x_2 = c/a$

- $x_v = \dfrac{-b}{2a} \qquad y_v = \dfrac{-\Delta}{4a}$

- $y = a(sen\,bx + c) + d$

OUTROS

- $(a+b)^2 = a^2 + 2ab + b^2$

- $(a+b) \cdot (a-b) = a^2 - b^2$