

A. Τριγωνομετρικές ταυτότητες

$$\begin{array}{lll}
 \sin(x+y) = \sin x \cos y + \cos x \sin y & \sin^2 x = \frac{1 - \cos 2x}{2} & \sin^2 x + \cos^2 x = 1 \\
 \sin(x-y) = \sin x \cos y - \cos x \sin y & \cos^2 x = \frac{1 + \cos 2x}{2} & \sec^2 \theta = 1 + \tan^2 \theta \\
 \cos(x+y) = \cos x \cos y - \sin x \sin y & \tan^2 x = \frac{1 - \cos 2x}{1 + \cos 2x} & \csc^2 \theta = 1 + \cot^2 \theta \\
 \cos(x-y) = \cos x \cos y + \sin x \sin y & \sin 2x = 2 \sin x \cos x & \sin = \eta\mu \\
 \sin x \sin y = \frac{1}{2} [\cos(x-y) - \cos(x+y)] & = \frac{2 \tan x}{1 + \tan^2 x} & \cos = \sigma\upsilon\nu \\
 \cos x \cos y = \frac{1}{2} [\cos(x-y) + \cos(x+y)] & \cos 2x = \cos^2 x - \sin^2 x & \tan = \epsilon\varphi \\
 \sin x \cos y = \frac{1}{2} [\sin(x+y) + \sin(x-y)] & = \frac{1 - \tan^2 x}{1 + \tan^2 x} & \cot = \sigma\varphi \\
 \sin x + \sin y = 2 \sin \left(\frac{x+y}{2}\right) \cos \left(\frac{x-y}{2}\right) & \tan 2x = \frac{2 \tan x}{1 - \tan^2 x} & \sec = \tau\epsilon\mu \\
 \sin x - \sin y = 2 \cos \left(\frac{x+y}{2}\right) \sin \left(\frac{x-y}{2}\right) & & \csc = \text{cosec} = \sigma\tau\epsilon\mu \\
 \cos x + \cos y = 2 \cos \left(\frac{x+y}{2}\right) \cos \left(\frac{x-y}{2}\right) & & \sin^{-1} = \text{τοξ}\eta\mu \\
 \cos x - \cos y = 2 \sin \left(\frac{x+y}{2}\right) \sin \left(\frac{y-x}{2}\right) & & \tan^{-1} = \text{τοξ}\epsilon\varphi
 \end{array}$$

B. Γνωστά ολοκληρώματα

$$\begin{array}{ll}
 \int \frac{dx}{a^2 + x^2} = \frac{1}{a} \tan^{-1} \frac{x}{a} + c & \int \frac{dx}{\sqrt{a^2 - x^2}} = \sin^{-1} \frac{x}{a} + c \\
 \int \sec x \, dx = \ln |\sec x + \tan x| + c & \int \csc x \, dx = \ln \left| \tan \frac{x}{2} \right| + c
 \end{array}$$

Γ. Τριγωνομετρικές Αντικαταστάσεις

Όρος	Αντικατάσταση	Περιορισμός
$\sqrt{a^2 - x^2}$	$x = a \sin \theta$	$-\pi/2 \leq \theta \leq \pi/2$
$\sqrt{a^2 + x^2}$	$x = a \tan \theta$	$-\pi/2 < \theta < \pi/2$
$\sqrt{x^2 - a^2}$	$x = a \sec \theta$	$0 \leq \theta < \pi/2, \text{ αν } x \geq a$ $\pi \leq \theta < 3\pi/2, \text{ αν } x \leq -a$