Τ Ρ Ι Γ Ω Ν Ο Μ Ε Τ Ρ Ι Α

Α. Βασικοί τριγωνομετρικοί εξισώσεις.

ημx = ημθ	x =2κπ+θ ή x = 2κπ + π - θ , κ∈ Z
συνx = συνθ	x = 2κπ ± θ, κ∈ Z
εφx = εφθ	x = κπ + θ, κ∈ Z
σφx = σφθ	x = κπ + θ , κ∈ Z

1. $\eta\mu x = 0 \Leftrightarrow x = \kappa\pi, \quad \kappa \in Z$

2. $\sigma\upsilon\nu x = 0 \Leftrightarrow x = \kappa\pi + \frac{\pi}{2}, \quad \kappa \in Z$

3. $\eta\mu x = \pm 1 \Leftrightarrow x = 2\kappa\pi \pm \frac{\pi}{2}$

4. $\sigma\upsilon\nu x = 1 \Leftrightarrow x = 2\kappa\pi$

$\sigma\upsilon\nu x = -1 \Leftrightarrow x = 2\kappa\pi + \pi$

Β. Τύποι

1. $\eta\mu(\alpha \pm \beta) = \eta\mu\alpha \cdot \sigma\upsilon\nu\beta \pm \eta\mu\beta \cdot \sigma\upsilon\nu\alpha$

2. $\eta\mu 2\alpha = 2\eta\mu\alpha \cdot \sigma\upsilon\nu\alpha$

3. $\sigma\upsilon\nu(\alpha \pm \beta) = \sigma\upsilon\nu\alpha \cdot \sigma\upsilon\nu\beta \mp \eta\mu\alpha \cdot \eta\mu\beta$

4. $\sigma\upsilon\nu\, 2\alpha = \begin{cases} \sigma\upsilon\nu^2\alpha - \eta\mu^2\alpha \\ 2\sigma\upsilon\nu^2\alpha - 1 \\ 1 - 2\eta\mu^2\alpha \end{cases}$

5. $\varepsilon\phi(\alpha \pm \beta) = \frac{\varepsilon\phi\alpha \pm \varepsilon\phi\beta}{1 \mp \varepsilon\phi\alpha \cdot \varepsilon\phi\beta}$

6. $\varepsilon\phi 2\alpha = \frac{2\varepsilon\phi\alpha}{1 - \varepsilon\phi^2\alpha}$

7. $\sigma\phi(\alpha \pm \beta) = \frac{\sigma\phi\alpha \cdot \sigma\phi\beta \mp 1}{\sigma\phi\beta \pm \sigma\phi\alpha}$

8. $\sigma\phi 2\alpha = \frac{\sigma\phi^2\alpha - 1}{2\sigma\phi\alpha}$

9. $\eta\mu^2\alpha + \sigma\upsilon\nu^2\alpha = 1$

10. $\varepsilon\phi\alpha \cdot \sigma\phi\alpha = 1$

Νόμος ημιτόνων	**Νόμος συνημιτόνων**
Σε κάθε τρίγωνο ΑΒΓ ισχύει: $\frac{\alpha}{\eta\mu A} = \frac{\beta}{\eta\mu B} = \frac{\gamma}{\eta\mu \Gamma} = 2R$ R ακτίνα του περιγεγρ. κύκλου στο ΑΒΓ	Σε κάθε τρίγωνο ΑΒΓ ισχύει: $\alpha^2 = \beta^2 + \gamma^2 - 2\beta\gamma\sigma\upsilon\nu A$