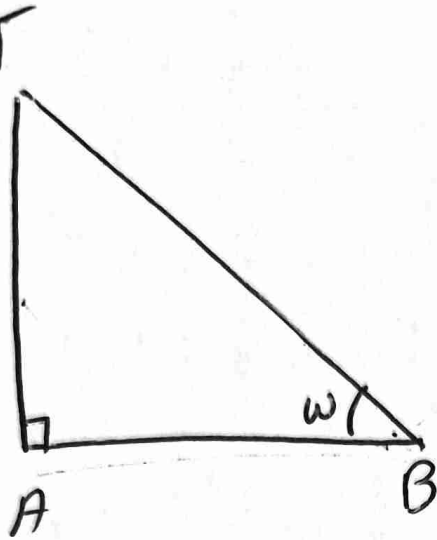


Τριγωνομετρία

1.



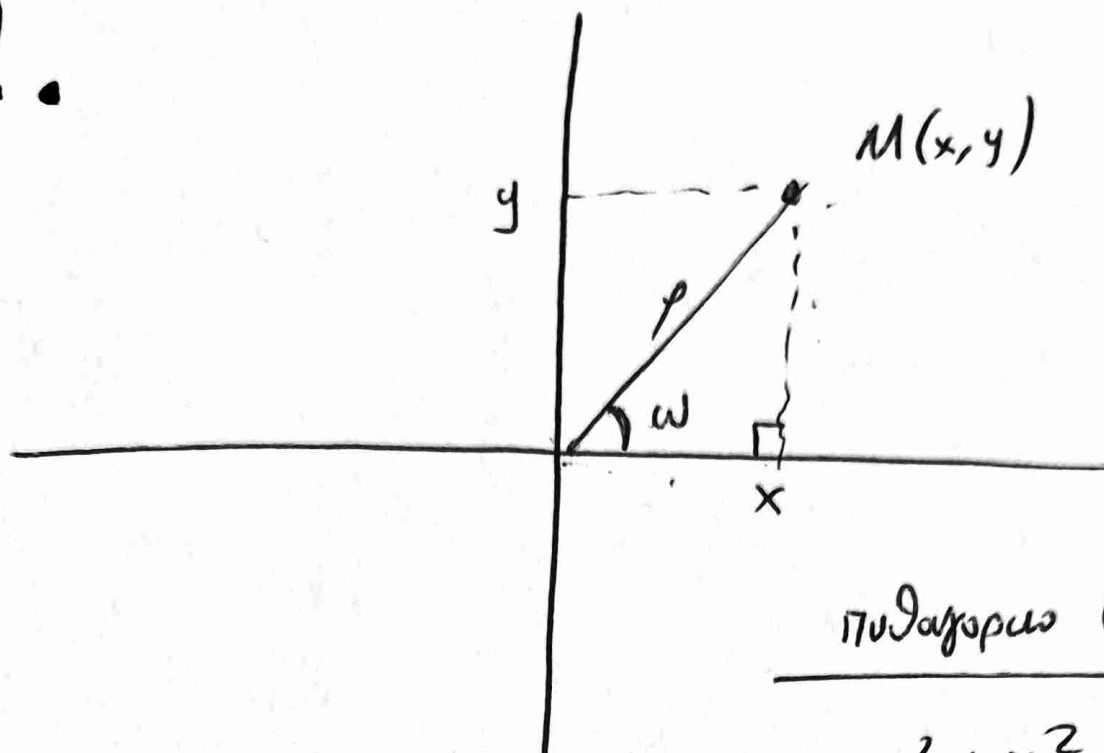
$$\eta\rho\omega^1 = \frac{\text{απεν. καθ.στ.}}{\text{υποτιν.}} = \frac{AG}{BG}$$

$$\sigma\omega\omega^1 = \frac{\text{προσκ. καθ.στ.}}{\text{υποτιν.}} = \frac{AB}{BG}$$

$$\epsilon\psi\omega^1 = \frac{\text{απεν. καθ.στ.}}{\text{προσκ. καθ.}} = \frac{AG}{AB}$$

$$\sigma\psi\omega^1 = \frac{\text{προσκ. καθ.στ.}}{\text{απεν. καθ.στ.}} = \frac{AB}{AG}.$$

2.



Πυθαγόρειο Θεώρημα

$$x^2 + y^2 = \rho^2$$

$$\rho = \sqrt{x^2 + y^2}$$

$$\eta\rho\hat{\omega} = \frac{y}{\rho}$$

$$\sigma\omega\hat{\omega} = \frac{x}{\rho}$$

$$\epsilon\psi\hat{\omega} = \frac{y}{x}$$

$$\sigma\varphi\hat{\omega} = \frac{x}{\rho}$$

3.

Δύο παρατηρησιακές γωνίες είναι 1500 ηπίζονα
αυτά δύο όδη τα υπολόγιζε.

x	0	30	45	60	90	180	270	360
ηπx	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	0	-1	0
σπx	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	-1	0	1
επx	0	$\frac{\sqrt{3}}{2}$	1	$\sqrt{3}$	-	0	-	0
σπx	-	$\sqrt{3}$	1	$\frac{\sqrt{3}}{3}$	0	-	0	-
rad	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	π	$\frac{3\pi}{2}$	2π

$$\sin x = \frac{\sin 5}{\sin 15}$$

$$\sin x = \frac{\sin 15}{\sin 5}$$

4. Μοιρα - rad

Διαφορετικ
ποιας

μετρηση.

$$\frac{\alpha}{\pi} = \frac{\mu}{180}$$

Εστω $\boxed{\mu = 120^\circ}$

$$\frac{\alpha}{\pi} = \frac{120}{180}$$

$$\alpha = \frac{12}{18} \pi$$

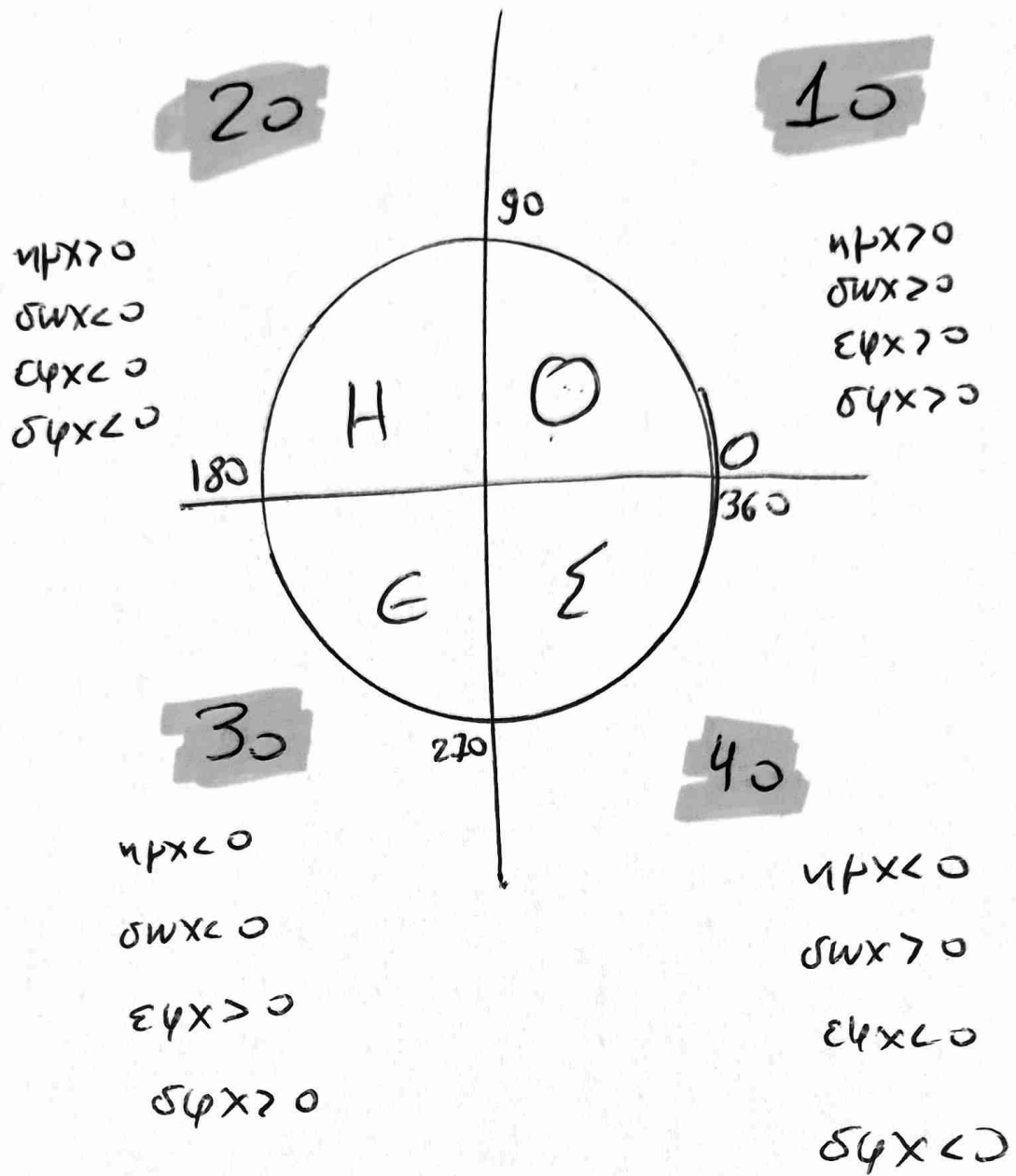
$$\boxed{\alpha = \frac{2\pi}{3}}$$

Αν εχω rad και θελω να τα
εχω μοιρα.

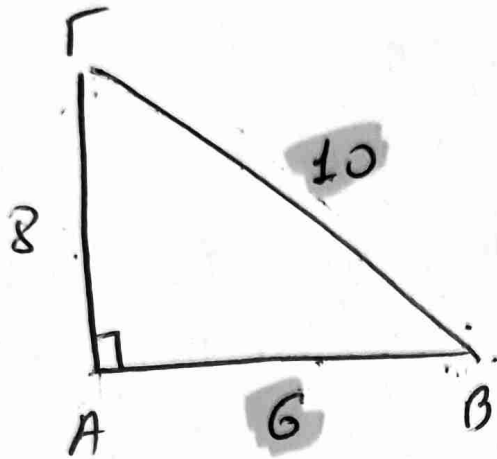
$$\alpha = \frac{2\pi}{3} = \frac{2 \cdot 180}{3} = 2 \cdot 60 = \underline{\underline{120}}$$

$$\alpha = \frac{5\pi}{6} = \frac{5 \cdot 180}{6} = 5 \cdot 30 = \underline{\underline{150}}$$

5.



Ασκηση 1



Ποδ. Δαφνιμ

$$A\Gamma^2 + AB^2 = B\Gamma^2$$

$$A\Gamma^2 + 6^2 = 10^2$$

$$A\Gamma^2 = 100 - 36$$

$$A\Gamma^2 = 64$$

$$\underline{\underline{A\Gamma = 8}}$$

$$\eta\mu\hat{B} = \frac{8}{10}$$

$$\sigma\omega\hat{B} = \frac{6}{10}$$

$$\epsilon\chi\hat{B} = \frac{8}{6}$$

$$\sigma\chi\hat{B} = \frac{6}{8}$$

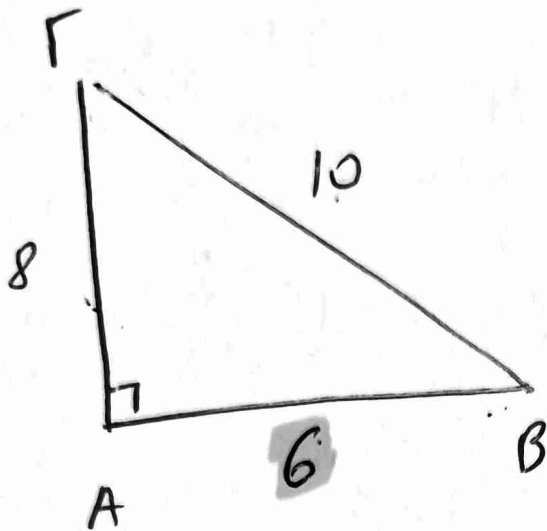
$$\eta\mu\hat{\Gamma} = \frac{6}{10}$$

$$\sigma\omega\hat{\Gamma} = \frac{8}{10}$$

$$\epsilon\chi\hat{\Gamma} = \frac{6}{8}$$

$$\sigma\chi\hat{\Gamma} = \frac{8}{6}$$

Άσκηση 2



Γνωρίζω ότι $\eta\mu\Gamma^{\wedge} = \frac{3}{5}$.

Ψάχνω την παραγωγή

$$A = \frac{\eta\mu^2 B + \sigma\omega^2 B}{\epsilon\psi\Gamma \cdot \sigma\psi\Gamma}$$

$$\eta\mu\Gamma^{\wedge} = \frac{3}{5}$$

$$\eta\mu\Gamma^{\wedge} = \frac{6}{B\Gamma}$$

$$\frac{3}{5} = \frac{6}{B\Gamma}$$

$$\Rightarrow 3B\Gamma = 30$$

$$\underline{\underline{B\Gamma = 10}}$$

Ποθ. Θωρήματα

$$A\Gamma^2 + A\beta^2 = 10^2$$

$$A\Gamma^2 + 36 = 100$$

$$A\Gamma^2 = 64$$

$$\underline{\underline{A\Gamma = 8}}$$

$$\eta\mu B = \frac{8}{10} = \frac{4}{5}$$

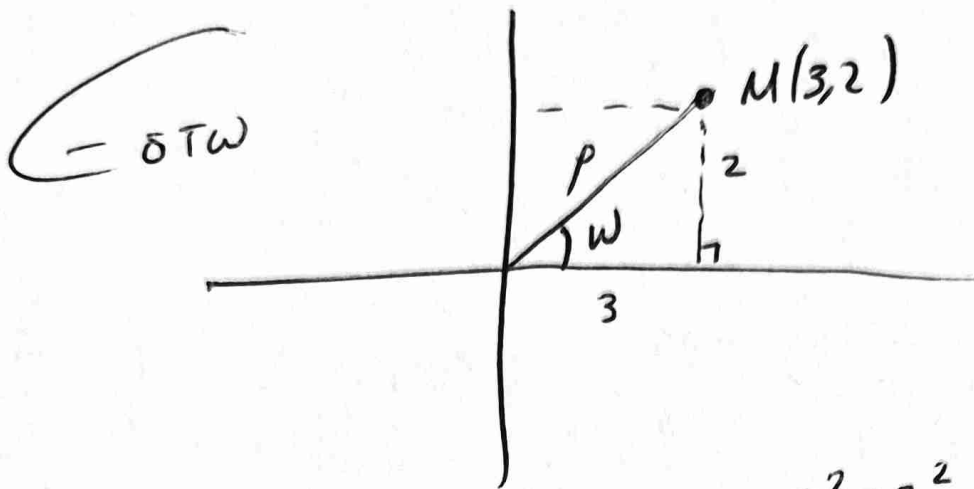
$$\sigma\omega B = \frac{6}{10} = \frac{3}{5}$$

$$\epsilon\psi\Gamma^{\wedge} = \frac{6}{8} = \frac{3}{4}$$

$$\sigma\psi\Gamma^{\wedge} = \frac{4}{3}$$

$$A = \frac{\left(\frac{4}{5}\right)^2 + \left(\frac{3}{5}\right)^2}{\frac{3}{4} \cdot \frac{4}{3}} = \frac{\frac{16}{25} + \frac{9}{25}}{1} = \frac{25}{25} = 1$$

Ασκηση 3



$$3^2 + 2^2 = \rho^2$$

$$9 + 4 = \rho^2$$

$$13 = \rho^2$$

$$\rho = \sqrt{13}$$

$$\eta \rho \omega^1 = \frac{y}{\rho} = \frac{2}{\sqrt{13}}$$

$$\sigma \omega \omega^1 = \frac{x}{\rho} = \frac{3}{\sqrt{13}}$$

$$\varepsilon \psi \omega^1 = \frac{y}{x} = \frac{2}{3}$$

$$\sigma \psi \omega = \frac{x}{y} = \frac{3}{2}$$

Άσκηση 4

Να βρεθεί το πρόσημο της
παραστάσης

$$A = \frac{\overset{\ominus}{\eta\mu 359} \cdot \overset{\oplus}{\sigma\omega 1^\circ}}{\underset{\ominus}{\epsilon\chi 92} \cdot \underset{\oplus}{\sigma\chi 181}} > 0$$

Άσκηση 5

⑥ Εστω ότι ψάχνω τον τριγωνομετρικά αριθμούς των 4600°

$$4600 = 12 \cdot 360 + 280$$

$$\eta\mu 4600 = \eta\mu 280$$

$$\sigma\omega 4600 = \sigma\omega 280$$

$$\epsilon\varphi 4600 = \epsilon\varphi 280$$

$$\delta\varphi 4600 = \delta\varphi 280$$

(β) Έστω ότι ψάχνω τους
Τριγωνομετρικούς αριθμούς των 1860

$$1860 = 5 \cdot 360 + 60$$

$$\eta\mu 1860 = \eta\mu 60 = \frac{\sqrt{3}}{2}$$

$$\sigma\omega 1860 = \sigma\omega 60 = \frac{1}{2}$$

$$\epsilon\varphi 1860 = \epsilon\varphi 60 = \sqrt{3}$$

$$\sigma\varphi 1860 = \sigma\varphi 60 = \frac{\sqrt{3}}{3}$$

Επορσιο Μαθημα

Ενοτητα 9

①

② .

⑪

⑫

⑭ .