Άσκηση 3η

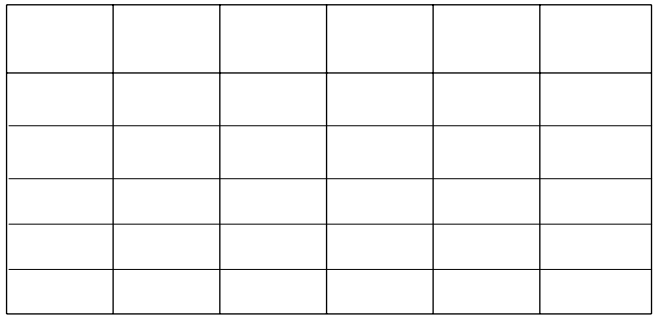
$x = a\,\lambda$
$y = \boldsymbol{M}$ ⟶ Εξισώσεις παράλληλων ευθειών

$$\boldsymbol{M} = a\,(1 - e^2)\,[\boldsymbol{M}_0\varphi - \boldsymbol{M}_2 \sin 2\varphi + \boldsymbol{M}_4 \sin 4\varphi - \boldsymbol{M}_6 \sin 6\varphi]$$

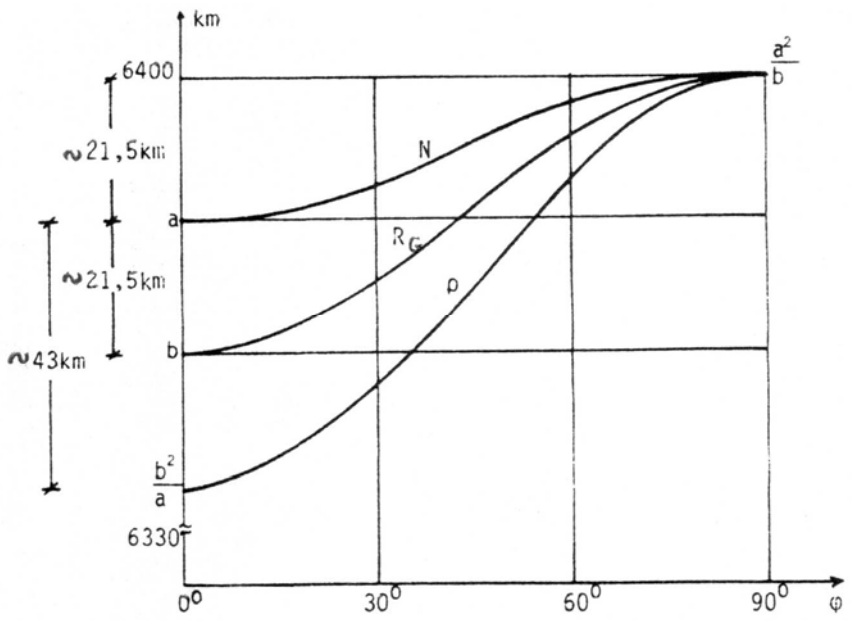
$dx = a\,d\lambda$ → όταν $d\lambda$ σταθερό → dx = σταθερό → μεσημβρινοί ισαπέχουν

$d\,y = dM$ → όταν $d\varphi$ σταθερό → $dM = f(\varphi)$ → παράλληλοι ?

$\varphi=90^0$

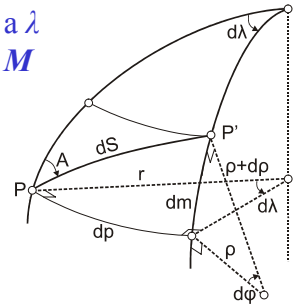


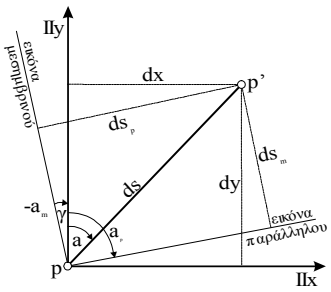
$\varphi=0^0$



Μεταβολή του μεγέθους των ακτίνων καμπυλότητας ρ, N και R_G με το πλάτος

$x = a\,\lambda$
$y = \boldsymbol{M}$



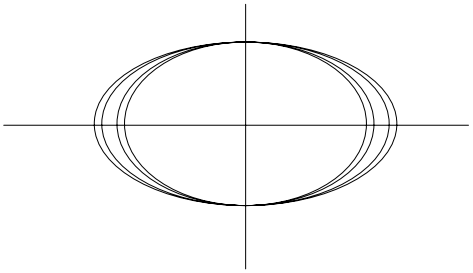


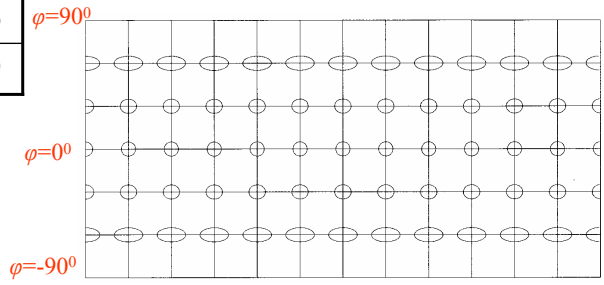
$$m_m = \frac{ds_m}{dm} = \frac{dy}{d\boldsymbol{M}} = \frac{d\boldsymbol{M}}{d\boldsymbol{M}} = 1,$$

$$m_p = \frac{ds_p}{dp} = \frac{dx}{N\cos\varphi\, d\lambda} = \frac{a\, d\lambda}{\frac{a}{\sqrt{1-e^2\sin^2\varphi}}\cos\varphi\, d\lambda} = \frac{\sqrt{1-e^2\sin^2\varphi}}{\cos\varphi}.$$

$$e = \sqrt{2f - f^2}. \qquad f = (a\text{-}b)/a$$

$O+E$	m_m	m_p
2	1	1,15
5	1	1,16
15	1	1,18
20	1	1,20
30	1	1,23
40	1	1,26
45	1	1,29





Οι ελλείψεις παραμόρφωσης της Ορθής Κυλινδρικής Ισαπέχουσας Προβολής