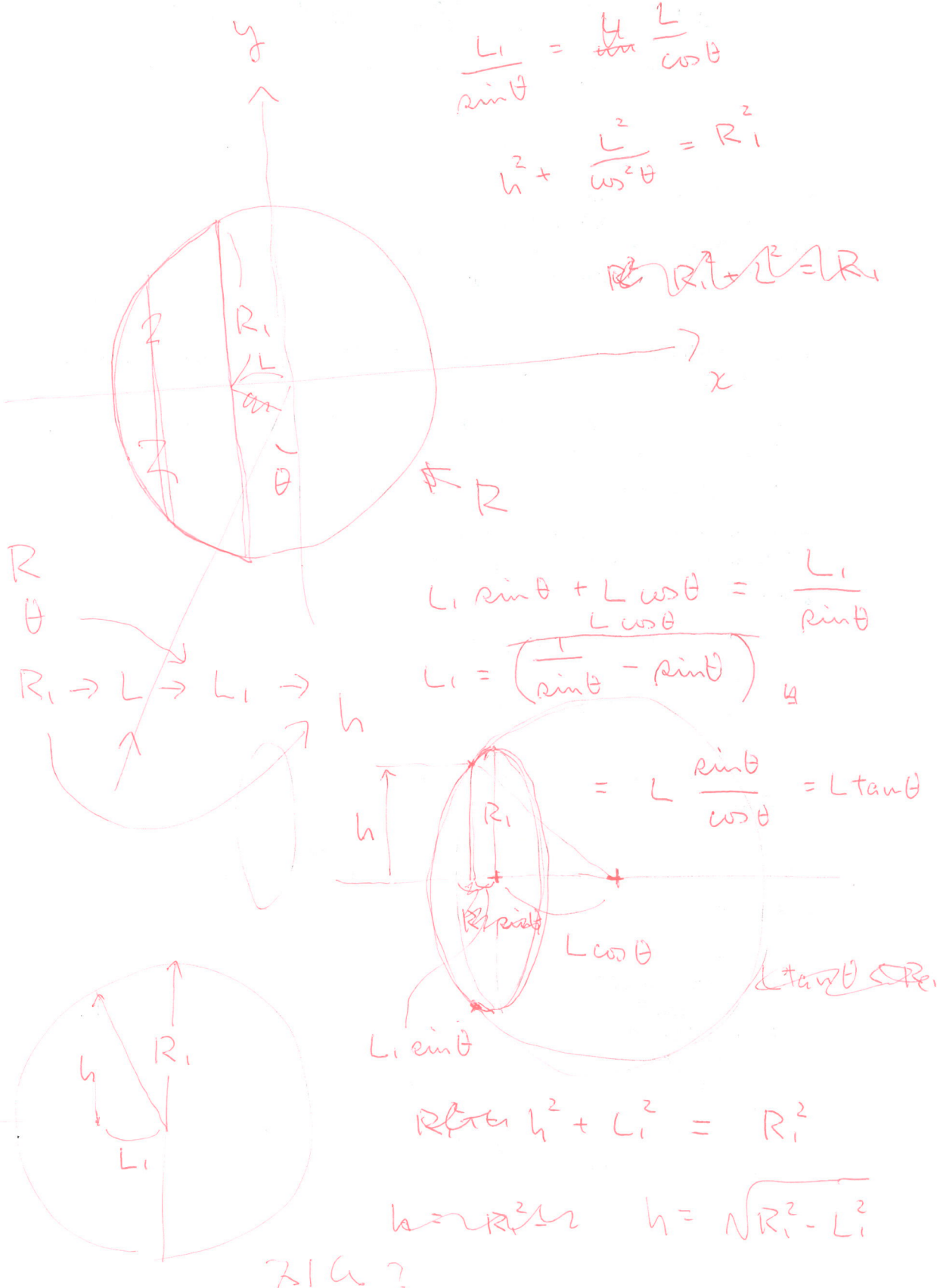
(平凸)レンズは斜めから見るとどう見えるか？



$\frac{L_1}{\sin\theta} = \frac{L}{\cos\theta}$

$h^2 + \frac{L^2}{\cos^2\theta} = R_1^2$

$L_1 \sin\theta + L\cos\theta = \frac{L_1}{\sin\theta}$

$L_1 = \left(\frac{1}{\sin\theta} - \sin\theta\right) L\cos\theta$

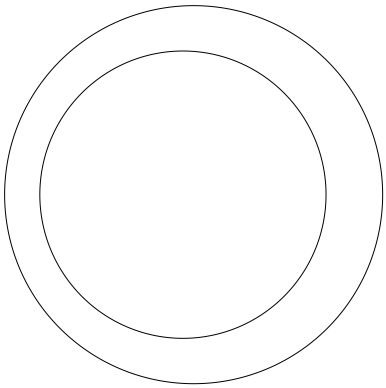
$= L\frac{\sin\theta}{\cos\theta} = L\tan\theta$

$h^2 + L_1^2 = R_1^2$

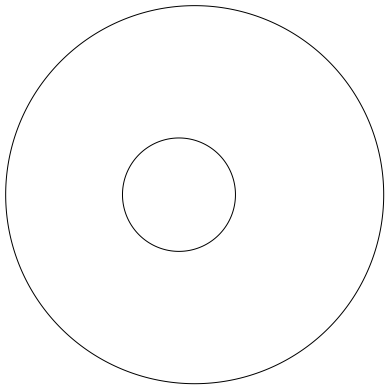
$h = \sqrt{R_1^2 - L_1^2}$

ズレる？

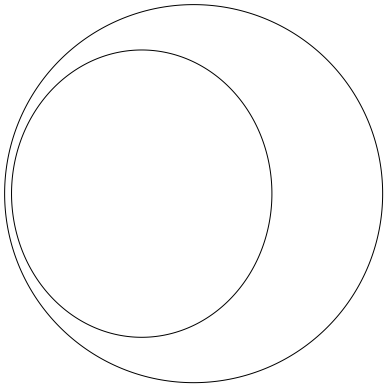
θ=85



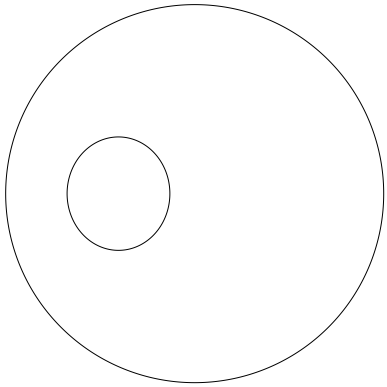
θ=85



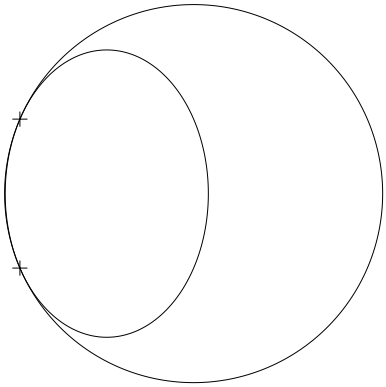
θ=65



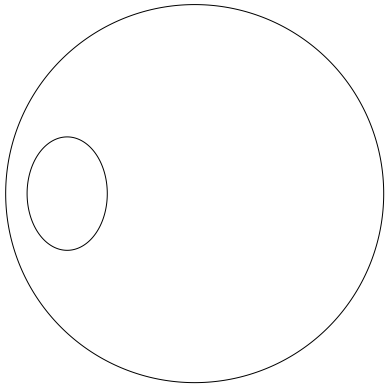
θ=65



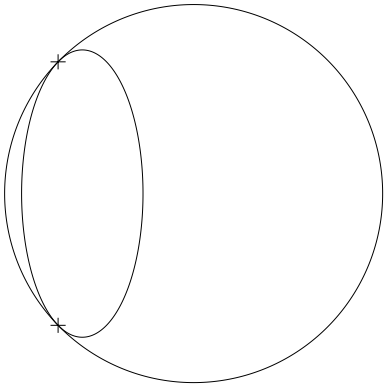
θ=45



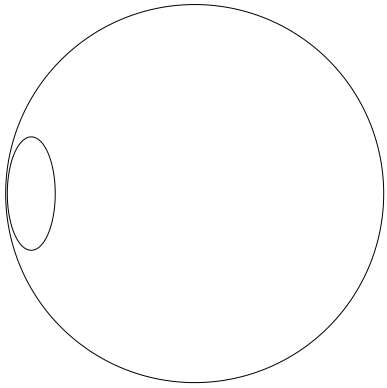
θ=45



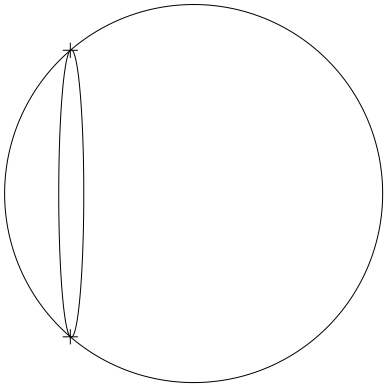
θ=25



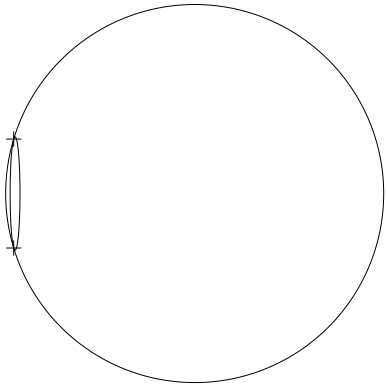
θ=25



θ=5



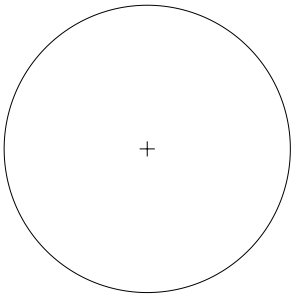
θ=5

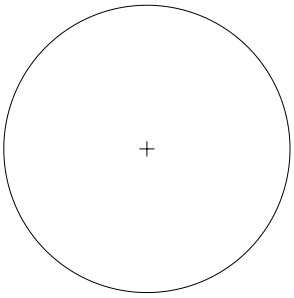


R=45, R1=38

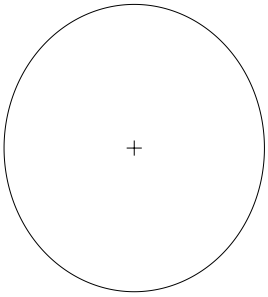
R=100, R1=38

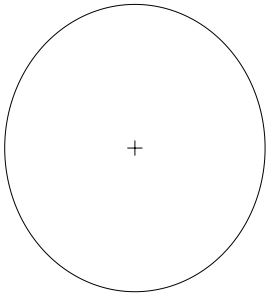
θ=85



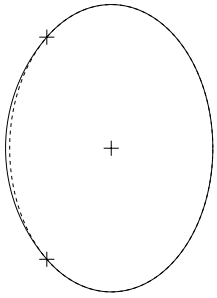


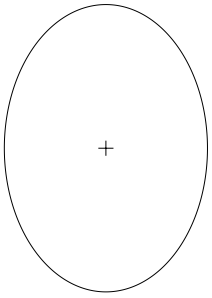
θ=65



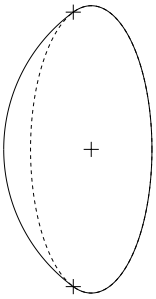


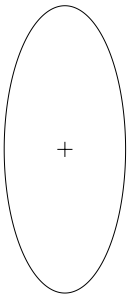
θ=45





θ=25





θ=5