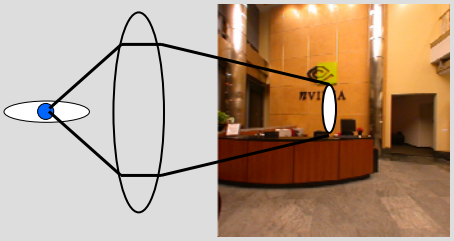
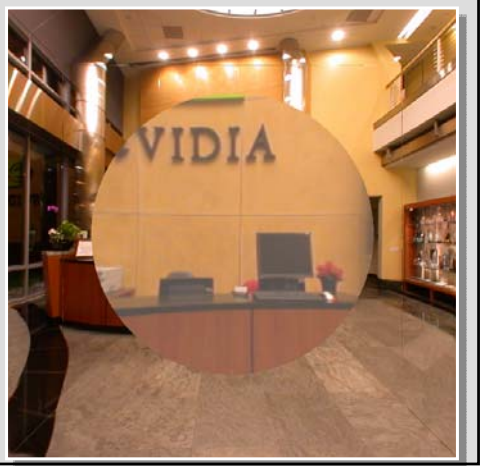
Creating Lens Effects

Mike Bailey
CS 519

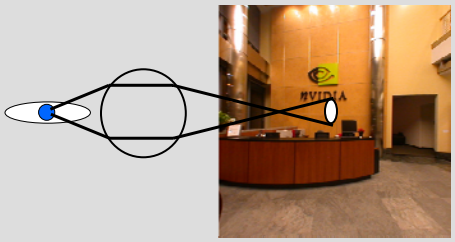
Oregon State University

Convex Lenses

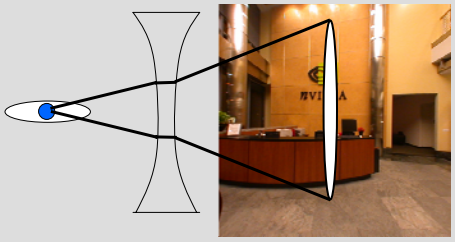


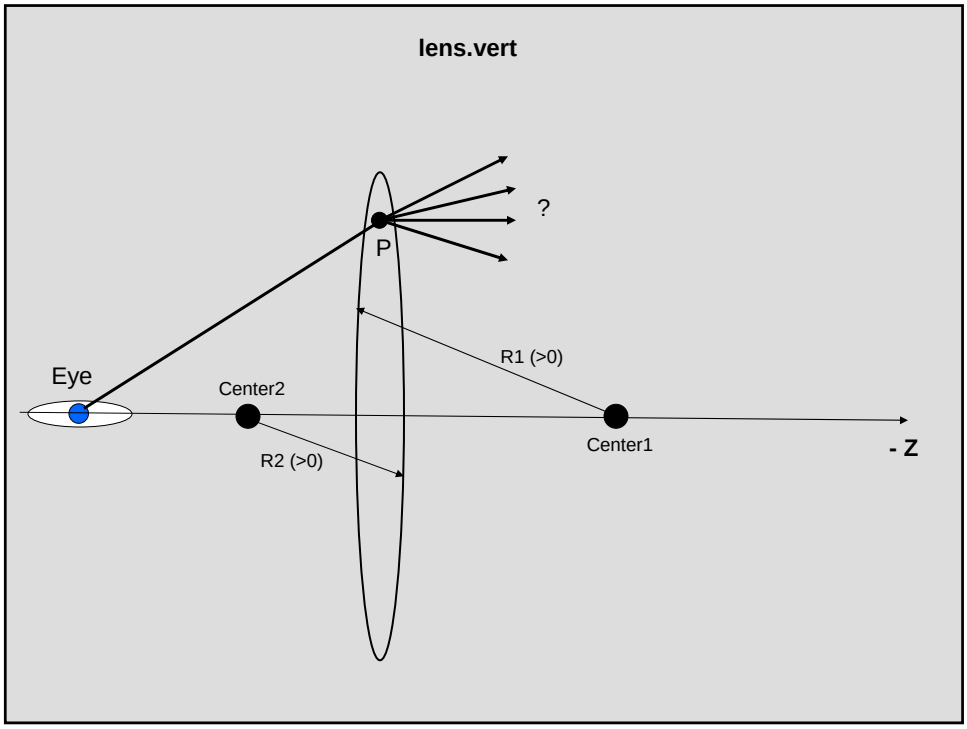


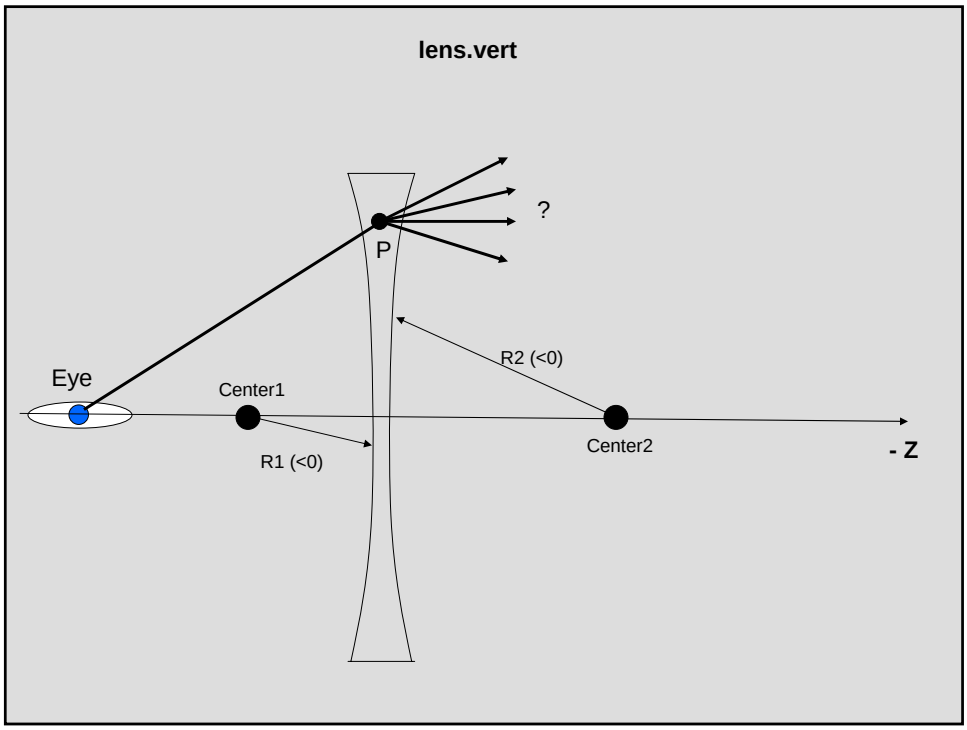
Convex Lenses



Concave Lenses

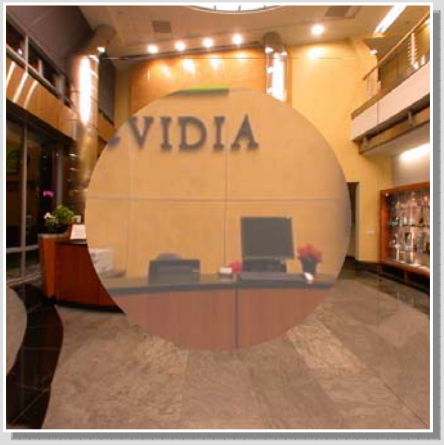



lens.vert
?
P
R1 (>0)
Eye
Center2
Center1
- Z
R2 (>0)


lens.vert
?
P
R2 (<0)
Eye
Center1
Center2
- Z
R1 (<0)

The Lensmaker's Equation

$$\frac{1}{f} = \left(\frac{\eta_{lens}}{\eta_{env}} - 1\right)\left(\frac{1}{r_1} - \frac{1}{r_2}\right)$$



Convex

Concave