

# ECUACION GENERAL DEL DIOPTRIO

$$\frac{n'}{s'} - \frac{n}{s} = \frac{n' - n}{R}$$

## FOCALES

$$f' = \frac{n'}{n' - n} R$$

$$f = -\frac{n}{n' - n} R$$

$$f' + f = R$$

$$\frac{f'}{s'} + \frac{f}{s} = 1$$

## AUMENTO LATERAL

$$M_L = \frac{y'}{y} = \frac{n s'}{n' s}$$

si  $\begin{cases} M_L > 0 & \text{imagen derecha} \\ M_L < 0 & \text{imagen invertida} \end{cases}$

DISTANCIA AL OBJETO  $s < 0$

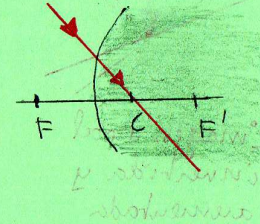
DISTANCIA A LA IMAGEN  $s' \begin{cases} > 0 & \text{imagen real} \\ < 0 & \text{imagen virtual} \end{cases}$

DIOPTRIO CONVEXO

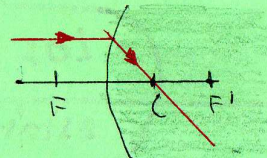
$R > 0$

$f < 0$

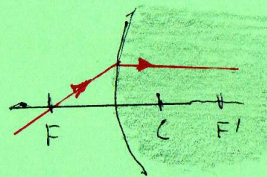
$f' > 0$



Rayo normal



Rayo horizontal



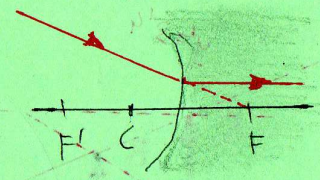
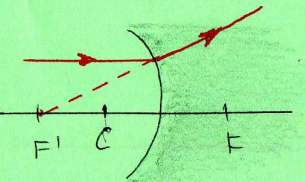
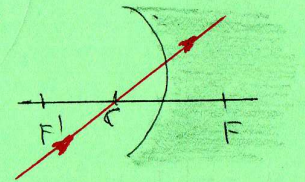
Rayo por foco

DIOPTRIO CÓNCAVO

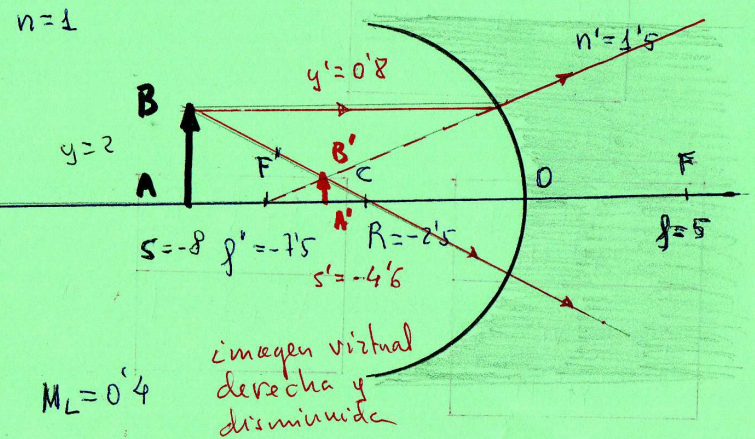
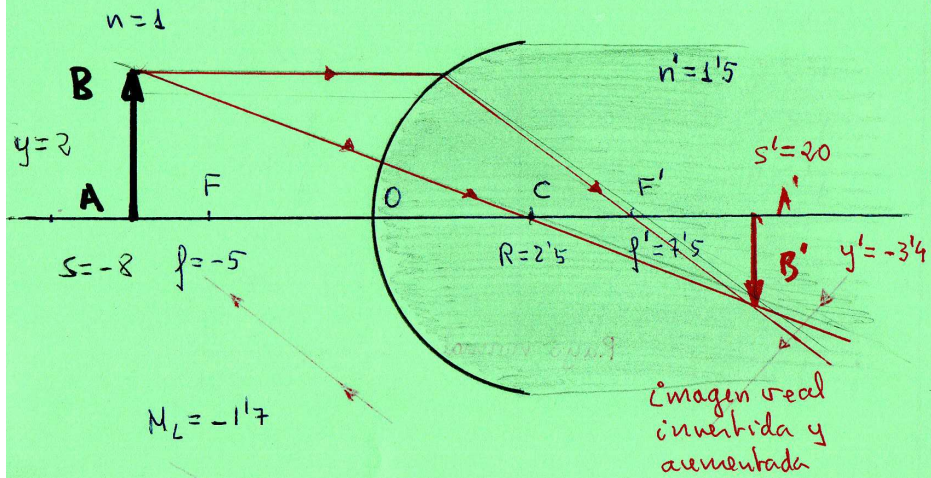
$R < 0$

$f > 0$

$f' < 0$



① CONVEXO. OBJETO DETRÁS DEL FOCO



Los dibujos no están a escala

② CONVEXO. OBJETO DELANTE DEL FOCO

