

Yes

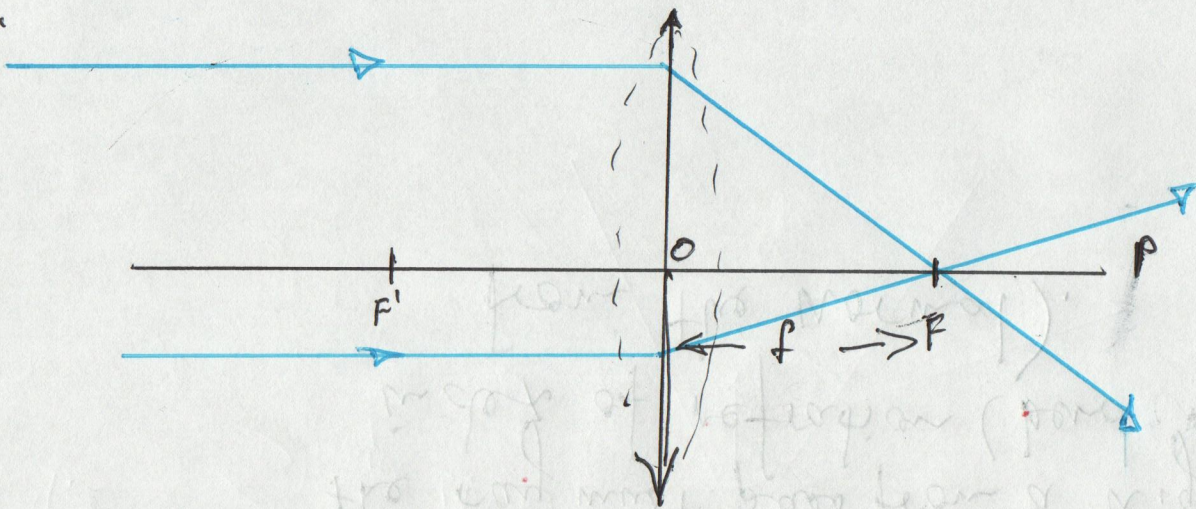
No

In order to have total internal reflection, the ray must pass from a higher to a lower index of refraction (bend ~~towards~~ away from the normal).

688

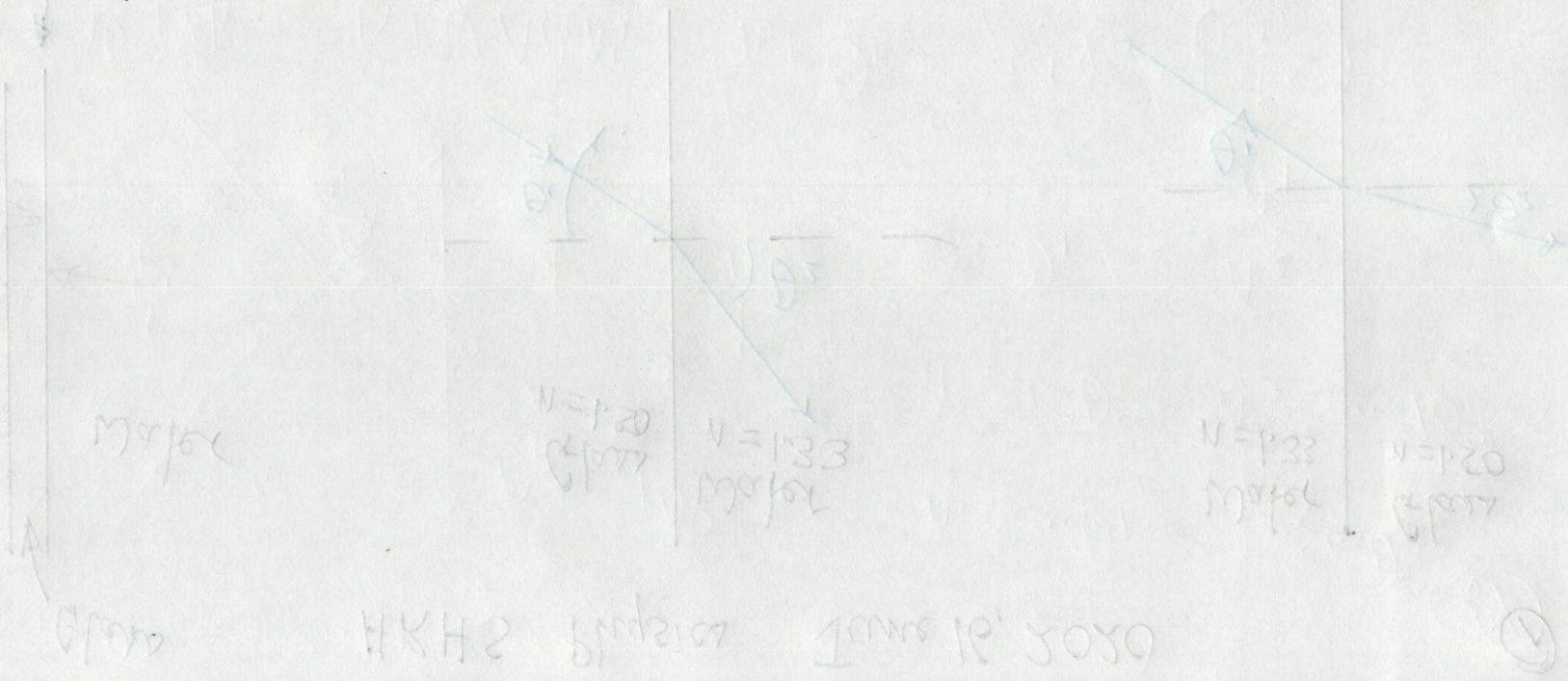
P. 88
8.

2

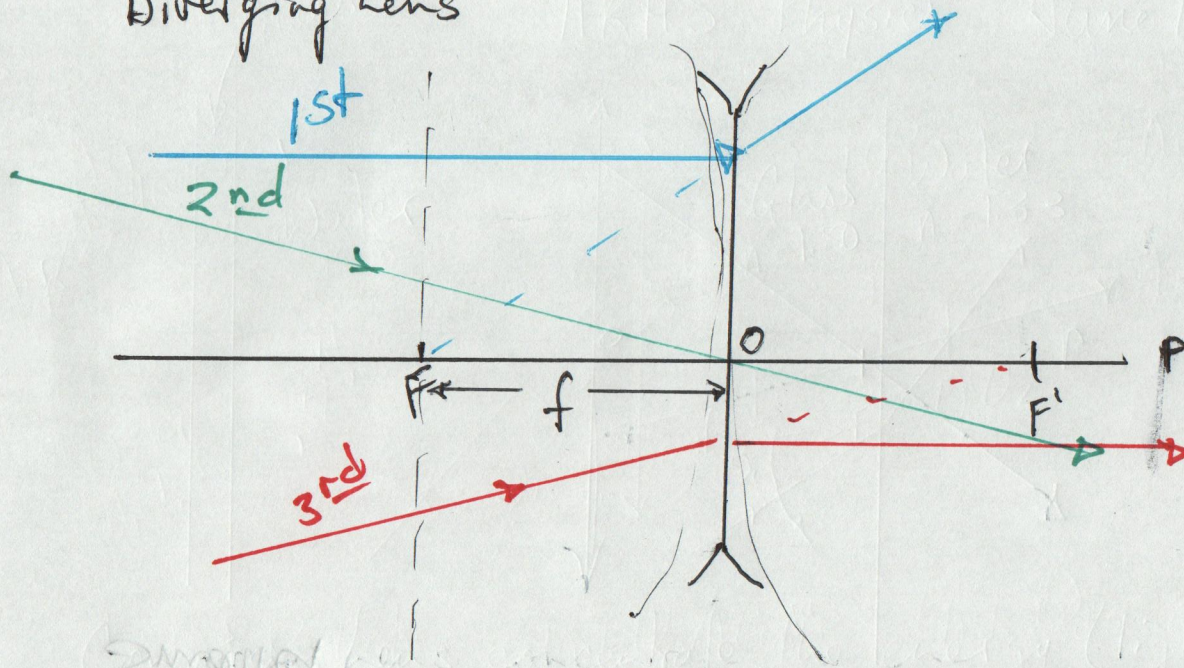


Converging lens concentrate the energy (light).

Place paper at the focal point (one focal length from ^{lens} ~~paper~~).



Diverging Lens

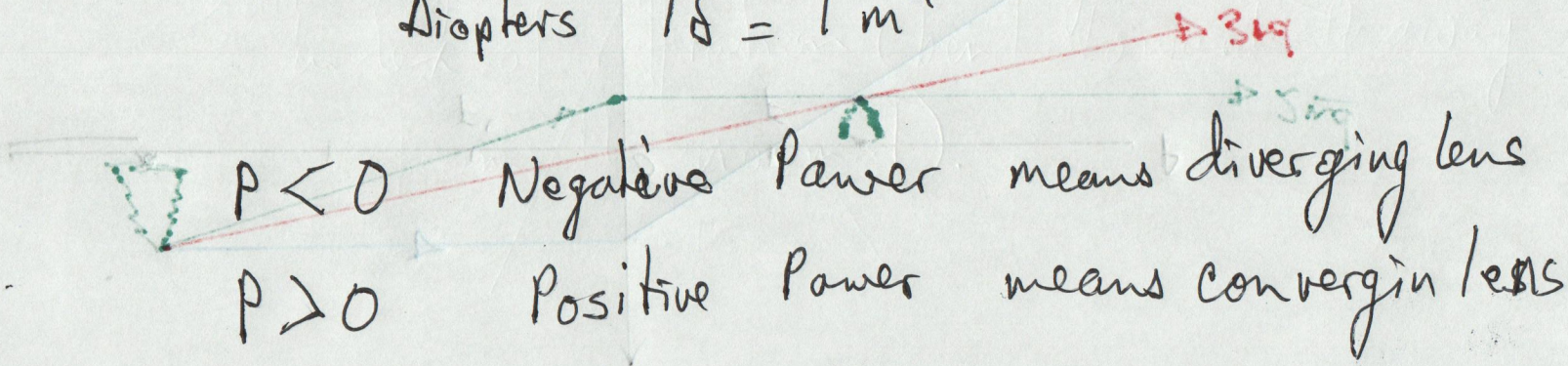


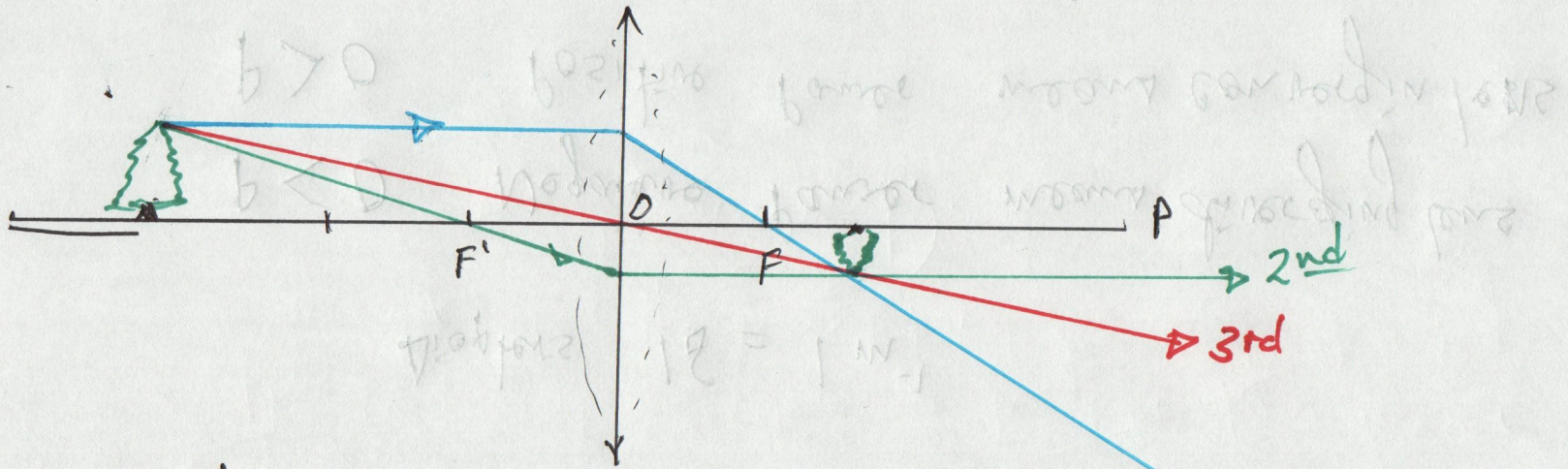
4.3

Optical power $P = \frac{1}{f}$

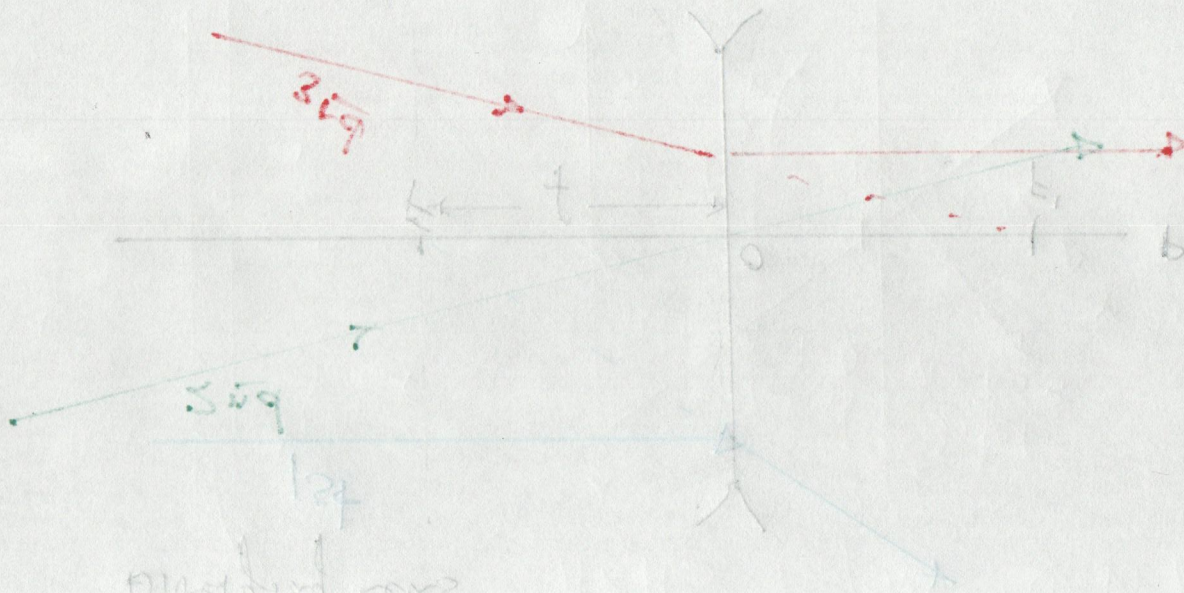
$P = -5.0 \text{ D}$

Diopeters $1 \text{ D} = 1 \text{ m}^{-1}$





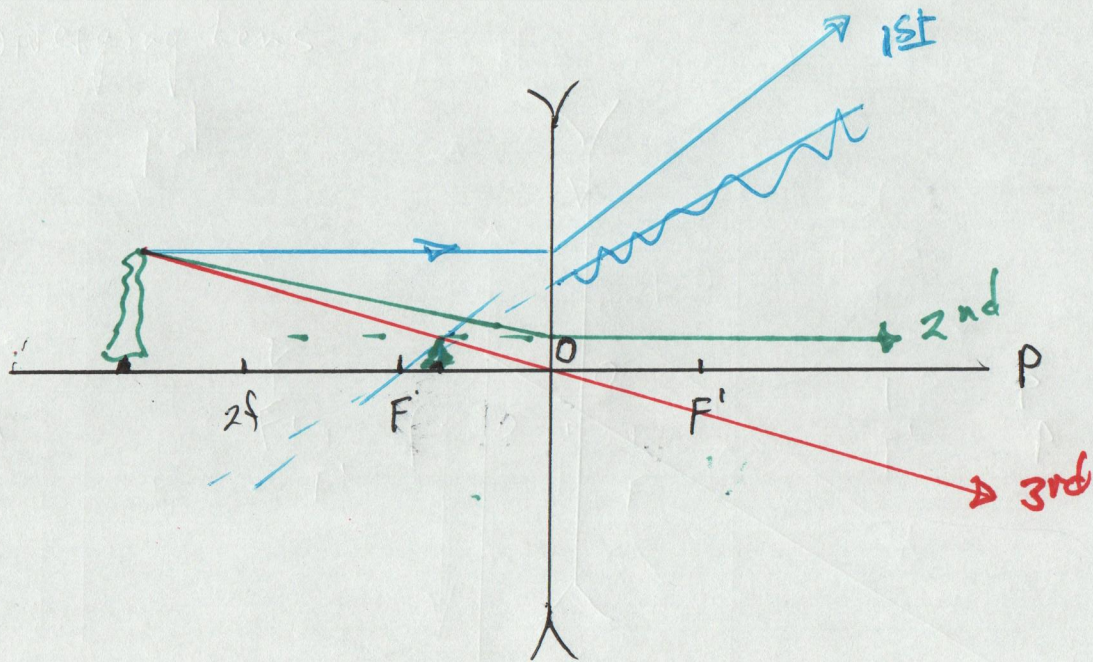
Real
Inverted
Smaller



Virtual
Upright
Larger

Diverging lens

5



Upright
Virtual
Smaller

4.3

Real

$$\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$$

$$M = \frac{h_i}{h_o} = -\frac{d_i}{d_o}$$

Angular magnification

$P < 0$ - Negative Power - means diverging lens

$P > 0$ - Positive Power - means converging lens