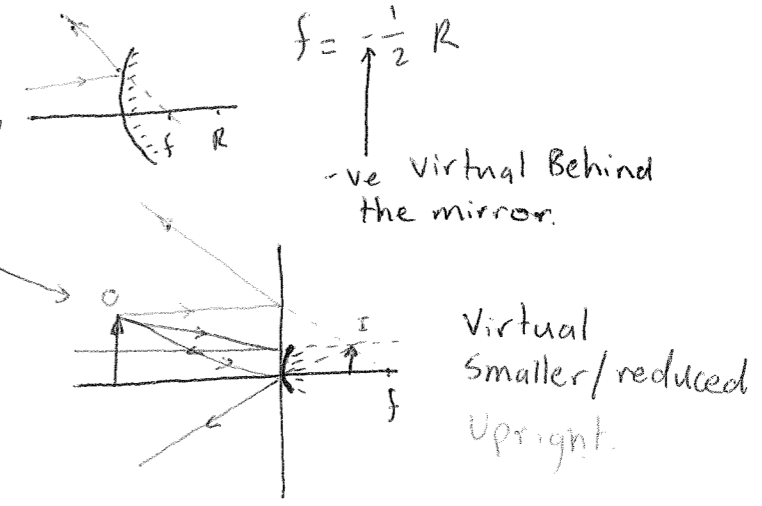
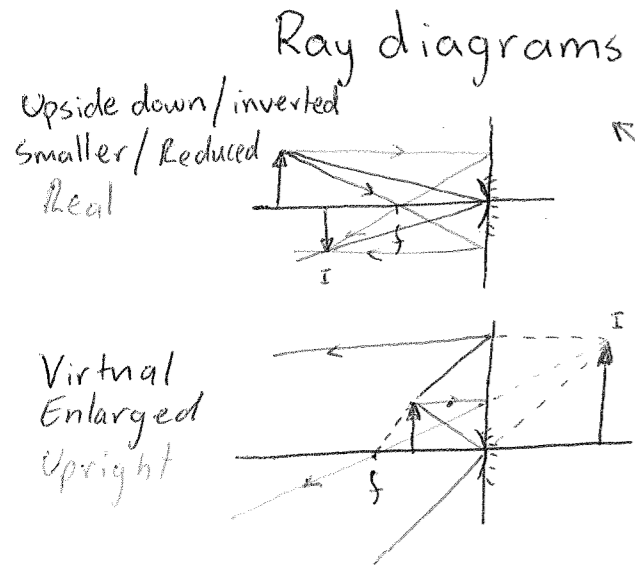


Mirrors

Concave $f = \frac{1}{2} R$

Convex $f = -\frac{1}{2} R$



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

$$m = \frac{d_i}{d_o} = \frac{h_i}{h_o}$$

Image on top

OPTICS

Snell's Law
 $n_1 \sin \theta_1 = n_2 \sin \theta_2$

is a reference to optic nature of substances.

$n_{air} = 1$
 $n > 1$ light has slowed down.

Refraction (Bending of light)

Soldiers marching

Dispersion

white light

ROYGBIV

Total Internal Reflection

TIR

only for n_1 greater than n_2

Lens

Convex/converging ()

Inverted
Size $\uparrow \downarrow$
Real

Virtual
Upright
Enlarged.

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

$$m = \frac{d_i}{d_o} = \frac{h_i}{h_o}$$

Double concave/Diverging lens $f = -ve$