Aim: Light Day 1

Light is an electro-magnetic wave

Transverse ~ and travels at 3.00×10^8 m/s

-Show on reference table

Go Over Spectrum on Reference Table ROYGBV

Ex 1 - Convert 700 nano-meters (nm), the wavelength of red light to meters 700×10^{-9} m 7.00×10^{-7} m

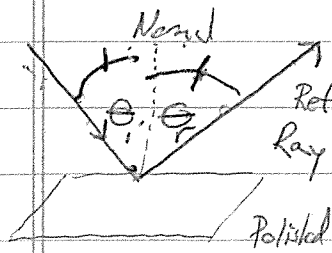
Ex 2 - What is the wavelength of Blue light?

$v = f\lambda$ $3.00 \times 10^8 \frac{m}{s} = 6.10 \times 10^{14}$ Hz λ $\lambda = 5 \times 10^{-7}$ m

H.W. Pg 344 16.1 2,5

Law of Reflection

When light strikes a reflecting surface, the angle of reflection is equal to the angle of incidence



Both of these angles are measured from the normal (perpendicular) line to the

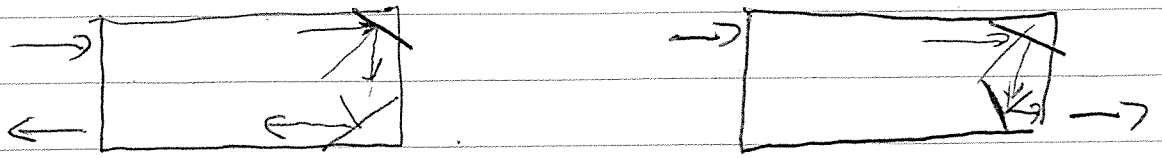
Angle of incidence = Angle of Reflection $\theta_i = \theta_r$ (Show a reference table)

Barron's book Pg 371 4, 6, 7, 8, 9, 10, 11, 12, 16, 19, 23, 22, 24, 28, 31, 33

Diffuse Reflection - When light is reflected from a non-smooth surface, the result is a diffuse reflection Book of Light

Mirror Problem

A beam of light enters & exits a hollow rectangular box. Place the mirrors to create the appropriate pattern



Ex 1