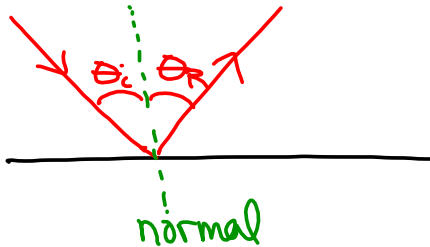


Geometric Optics

Day 1: Regular and Diffuse Reflection

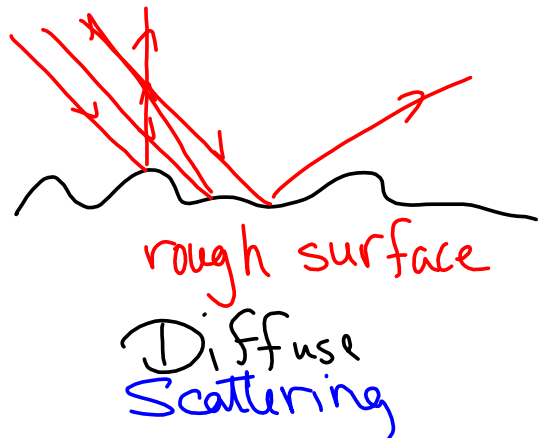
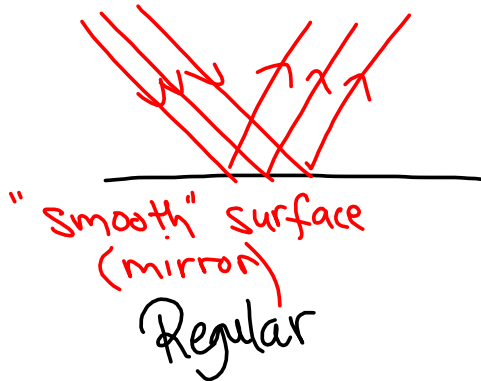


$$\theta_i = \theta_r$$

Law of reflection

θ_i = \angle of incidence

θ_r = \angle of reflection



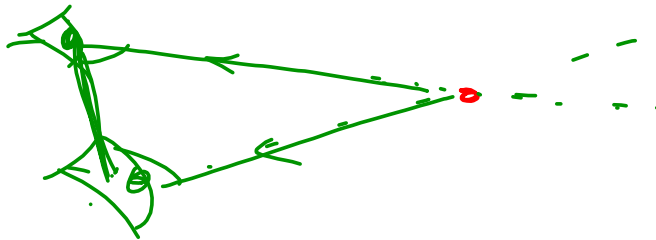
Colours

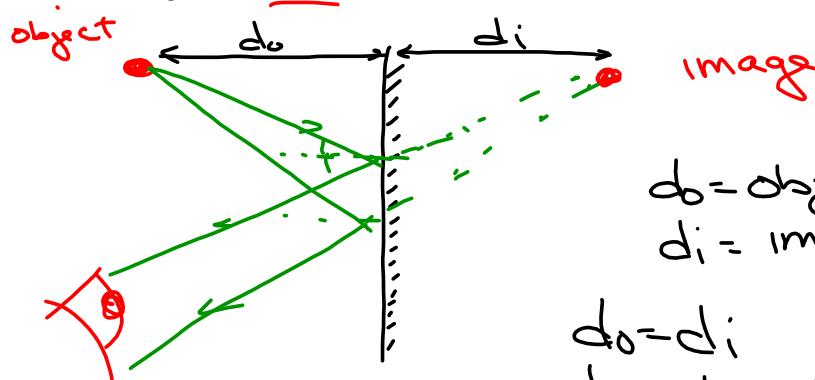
white - reflects all colours } of light
black - absorbs all colours }
different colours, different

We see the colours /
frequencies of light
reflected to our eyes

f, λ
red \sim 650 nm
violet \sim 300 nm

Depth Perception and Triangulation



Ray Model of Light and Plane Mirrors

d_o = object distance
 d_i = image distance

$$d_o = d_i$$

$$h_o = h_i \text{ (heights)}$$

The image is virtual

- The rays of light do not meet
- It cannot be projected onto a surface.

