

Homework

1) Ray's linear propagation describes the tendency of electromagnetic waves (light) to travel in a straight line. Light does not deviate when travelling through a homogeneous medium, which has the same refractive index throughout otherwise, light undergoes refraction.

2) A pinhole camera is a simple camera ~~without~~ without a lens but with a tiny aperture (lenses called, pinhole) - effectively a light-proof box with a small hole in one side. Light from a scene passes through the aperture and projects an inverted image on the opposite side of the box, which is seen as the camera obscura effect.

3) The size of the image depend on the two factors

The distance of screen (i.e. tracing paper) from the pinhole and the distance of the object (i.e. candle) in front of the pinhole

4) The image in a pinhole camera has the following characteristics:

- The image in a pinhole camera is inverted.

real, (upside down) as compared to the object

- The image in a pinhole camera is real ~~(formed in camera)~~ a ~~virtual~~ (because it can be formed on a screen)
- The image in a pinhole camera is of the same colour as the object