

OPTICS



Diffusion of Light

- 1 Light spreads in a straight line
- 2 Punctual sources of light produce sharp shadows
- 3 Diffuse sources light produce indistinct shadows
- 4 Eclipse of the moon (model)
- 5 Eclipse of the sun (model)

Reflection

- 6 The Law of Reflection
- 7 A mirror is rotated
- 8 Regular reflection
- 9 Diffuse reflection of light - diffraction
- 10 Position of an image point on a plane mirror
- 11 Creating a virtual image on a smooth mirror
- 12 Concave mirror as a light collector
- 13 Model of a headlight
- 14 Path of rays in a concave mirror
- 15 Images in a concave mirror
- 16 Movement of rays in a convex mirror
- 17 Path of rays in a convex mirror
- 18 Path of rays when forming an image in a convex mirror

Refraction

- 19 Refraction of light viewed qualitatively
- 20 Angle of incidence and angle of refraction
- 21 Refraction from the perpendicular – total reflection in water
- 22 Refraction to the perpendicular
- 23 Calculating the index of refraction
- 24 Refraction from the perpendicular – total reflection in glass
- 25 Total reflection in a semi-circular body
- 26 Basic principle of a photoconductor
- 27 Photoconductor, flexible
- 28 The plane parallel plate
- 29 Refraction of light in a prism
- 30 Deviating prism
- 31 Inverting prism
- 32 Torricelli's prism

Lenses

- 33 Refractive effect of a convergent lens
- 34 Refractive effect of a divergent lens
- 35 Position of the focal point of a biconvex lens
- 36 Position of the focal point of a thin planoconvex lens
- 37 Position of the focal point of a thick planoconvex lens
- 38 Refractive effect of convergent and divergent lenses on diverging light rays
- 39 Lens systems
- 40 Special rays on a convergent lens
- 41 Special ray paths on a planoconvex lens
- 42 Special ray paths on a concave lens
- 43 Path of rays when forming an image on a convergent lens
- 44 Path of rays when forming an image on a divergent lens

The Eye

- 45 Ocular accommodation
- 46 Faulty vision and its correction – near-sightedness
- 47 Faulty vision and its correction – far-sightedness

Optical Instruments

- 48 Path of rays in a single lens reflex camera
- 49 Path of rays in a slide projector
- 50 Model of a magnifying glass
- 51 Model of a microscope
- 52 Model of an astronomical telescope
- 53 Model of a Galilean telescope

Color

- 54 Dispersion of color
- 55 Spectral colors cannot be further dispersed
- 56 Converging spectral colors to make white
- 57 Mixed color of a partial spectrum
- 58 Complementary colors – color theory
- 59 Subtractive mixture of colors
- 60 Additive mixture of colors

Note:

↑ ● This symbol on the fan light means that the pin in the light must be pulled out in order for the light to be emitted divergently.