

TABLE OF CONTENTS

Licensing

1: Reflection and Refraction

- 1.1: Introduction
- 1.2: Reflection at a Plane Surface
- 1.3: Refraction at a Plane Surface
- 1.4: Real and Apparent Depth
- 1.5: Reflection and Refraction
- 1.6: Refraction by a Prism
- 1.7: The Rainbow
- 1.8: Differential Form of Snell's Law

2: Lens and Mirror Calculations

- 2.1: Introduction to Lens and Mirror Calculations
- 2.2: Limitations
- 2.3: Real and Virtual
- 2.4: Convergence
- 2.5: Power
- 2.6: Magnification
- 2.7: Examples
- 2.8: Derivation of the Powers
 - 2.8A: Power of a Lens
 - 2.8B: Power of a Refracting Interface
 - 2.8C: Power of a Mirror
- 2.9: Derivation of Magnification
- 2.10: Designing an Achromatic Doublet
- 2.11: Thick Lenses
- 2.12: Principal Planes
- 2.13: The Lazy Way
- 2.14: Exercise

3: Optical Instruments

- 3.1: The Driving Mirror
- 3.2: The Magnifying Glass
- 3.3: Spectacle Lenses
- 3.4: The Camera
- 3.5: The Telescope
- 3.6: The Microscope

4: Optical Aberrations

- 4.1: Introduction to Optical Aberrations
- 4.2: Spherical Aberration
- 4.3: Astigmatism
- 4.4: Coma
- 4.5: Curvature of Field
- 4.6: Distortion

[Index](#)

[Index](#)

[Glossary](#)

[Detailed Licensing](#)