

2.1: What You Should Know and be able to do After Studying This Chapter

- Principle of Fermat.
- Understand the approximation made in Gaussian geometrical optics.
- Know how to work with the sign convention of the Lens Maker's Formula (not the derivation of the formula).
- Understand how the Lens Maker's Formula of a single lens follows from the formula for a single interface.
- Understand how the image of two and more lenses is derived from that of a single lens by construction and by computing the intermediate images. You do not need to know the imaging equation and the formulae for the focal distances of two thin lenses.
- Understand the matrix method (you do not need to know the matrices by heart).
- Understand the modification of the lens model to incorporate a thick lens.
- Understand the limitations of geometrical optics, in particular when diffraction optics is needed.

Nice software for practicing geometrical optics: <https://www.geogebra.org/m/X8RuneVy>

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