

Problem Set 25

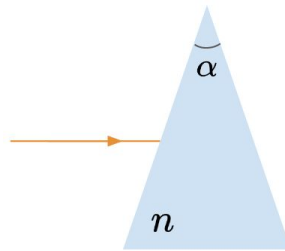
June 22, 2020

Problem 1

Derive Snell's law from Fermat's principle. This can be done without calculus.

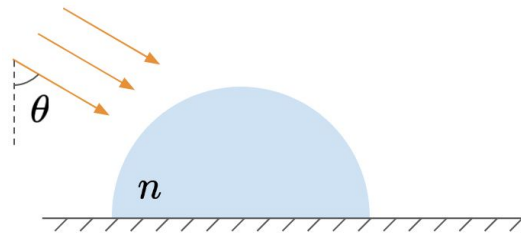
Problem 2

A horizontal beam of light is incident on a glass prism as shown. Find the angle at which the beam exits its right side. Also indicate the conditions required for the beam to exit the prism.



Problem 3

Parallel beams of light fall on a half-cylindrical piece of glass. Find the regions of the surface below that will be illuminated.



Problem 4

A beam of light falls vertically on a reflective surface as shown below. Find the y-intercept of the reflected beam.

