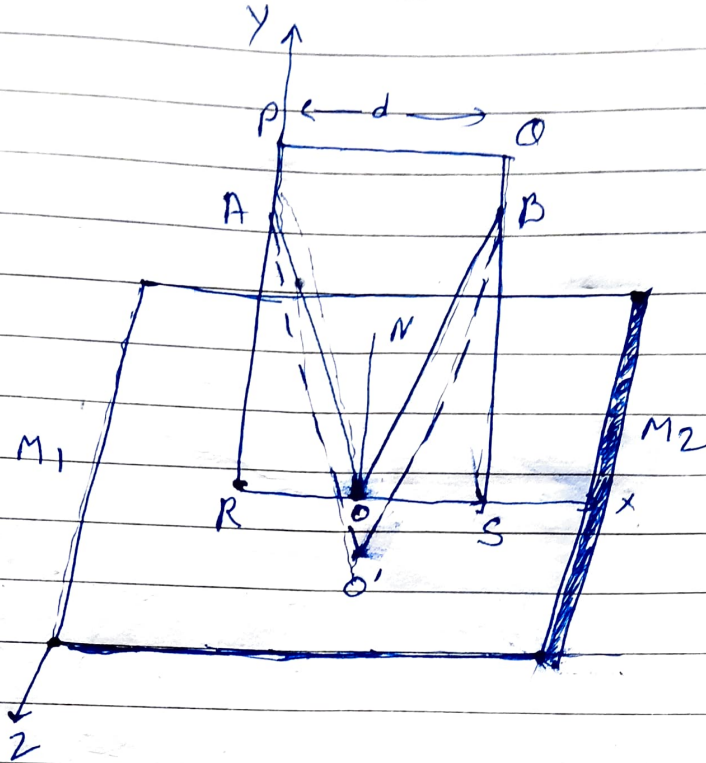


Laws of Reflection from Fermat's principle



consider a plane mirror M_1, M_2 and a plane PORS Normal to it

A ray of light AD incident at O is reflected along OB and Normal ON lies in the plane PORS

consider another ray AO' Reflected from the point O'

$$OA \perp OA'$$

$$(OA + OB) - 1 = \Delta_0$$

$$(O'A + O'B) \mu = \Delta O'$$

$$\Delta O' > \Delta O$$

From Fermat's minimum optical path rule.

First law is proved that incident ray, reflected ray and normal lie in a same plane.