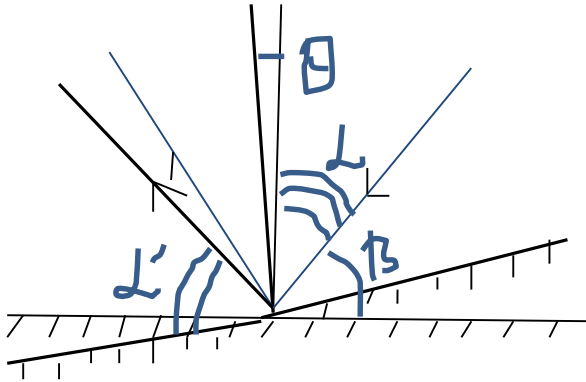# Answer on Question #50132, Physics, Optics

Task: A light ray makes an incident angle 40^0. If the mirror is rotated such that the mirror makes an angle with the incident ray 40^0 , then by how much will the reflected ray be rotated?

Answer:

If the mirror is rotated through an angle θ, then the reflected ray will be rotated through an angle 2θ.

$\alpha = 40^0, so \beta = 50^0$

$\alpha^{/} = 40^0 \Rightarrow \theta = 10^0$

reflected ray will be rotated through an angle 20^0