

#Jenny



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Cool! I'am really happy

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My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

PHYS 222
Worksheet 22 – Reflection and Refraction
Supplemental Instruction
Iowa State University

Lecturer: Alex Joraid
Course: PHYS 222
Instructor: Dr. Paula Herman-Sikody
Date: 4/9/12

Useful Equations

$$\theta_i = \theta_r \quad \text{Incident angle equals reflected angle}$$
$$n_1 \sin \theta_i = n_2 \sin \theta_r \quad \text{Snell's Law for refracted rays}$$

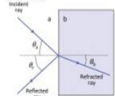
Procedures

How to find the image of a reflected object

1. Draw two rays: one normal to the surface, one reflected ray
2. Extrapolate rays until they intersect



Refraction:



Related Problems

- 1) (a) A tank containing methanol has walls 2.50 cm thick made of glass of refractive index 1.50. Light from the outside air strikes the glass at a 41.3 degree angle with the normal to the glass. Find the angle the light makes with the normal in the methanol. Methanol has the refractive index of 1.363.

$$n_1 \sin \theta_1 = n_2 \sin \theta_2 \rightarrow \theta_2 = \sin^{-1} \left(\frac{n_1 \sin \theta_1}{n_2} \right) = 25.2$$
$$n_2 \sin \theta_2 = n_3 \sin \theta_3 \rightarrow \theta_3 = \sin^{-1} \left(\frac{n_2 \sin \theta_2}{n_3} \right) = 29.8$$

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Reflection And Refraction Workbook Page Answers