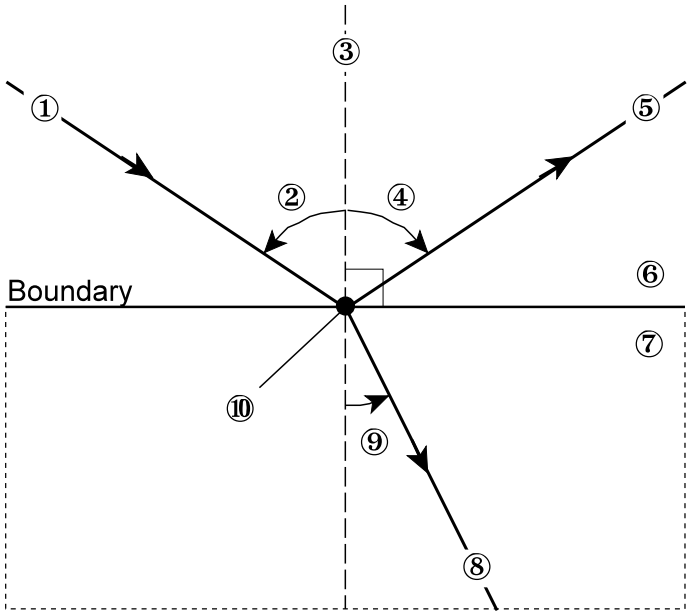
Refraction is often accompanied by reflection. Some of the light that strikes water is reflected off the water, but a great deal of light is also refracted as it enters the water and illuminates the water below the surface. A transparent window exhibits the same property that light can be both reflected and refracted at the same time.

This is called **partial reflection/refraction**. This effect is enhanced if glass has a special film coating behind it that allows some of the incident light to be refracted but that also reflects much of the incident light. This results in a mirrored surface that you can see through, but others cannot. This is exactly how mirrored sunglasses are made.

Two-way mirrors are also used in the windows of many buildings. In the summer time, these windows reflect some of the incident sunlight which reduces air-conditioning costs. The reflection of clouds and the blue sky off these windows also makes them very visually appealing.




① _____

② _____

③ _____

④ _____

⑤ _____

⑥ _____

⑦ _____

⑧ _____

⑨ _____

⑩ _____

**INSTRUCTIONS:**

1. Refer to P.428 and 436 of your textbook to help label/define the diagram.
2. Which medium (⑥ or ⑦) is more "refractive"? How can you tell?
3. Which medium can be classified as the "fast" medium? The "slow" medium?
4. What happens if the incident ray is normal to the boundary (ie ∠i = 0°)?