

H.W.
27/11/2021

HOME ASSIGNMENT

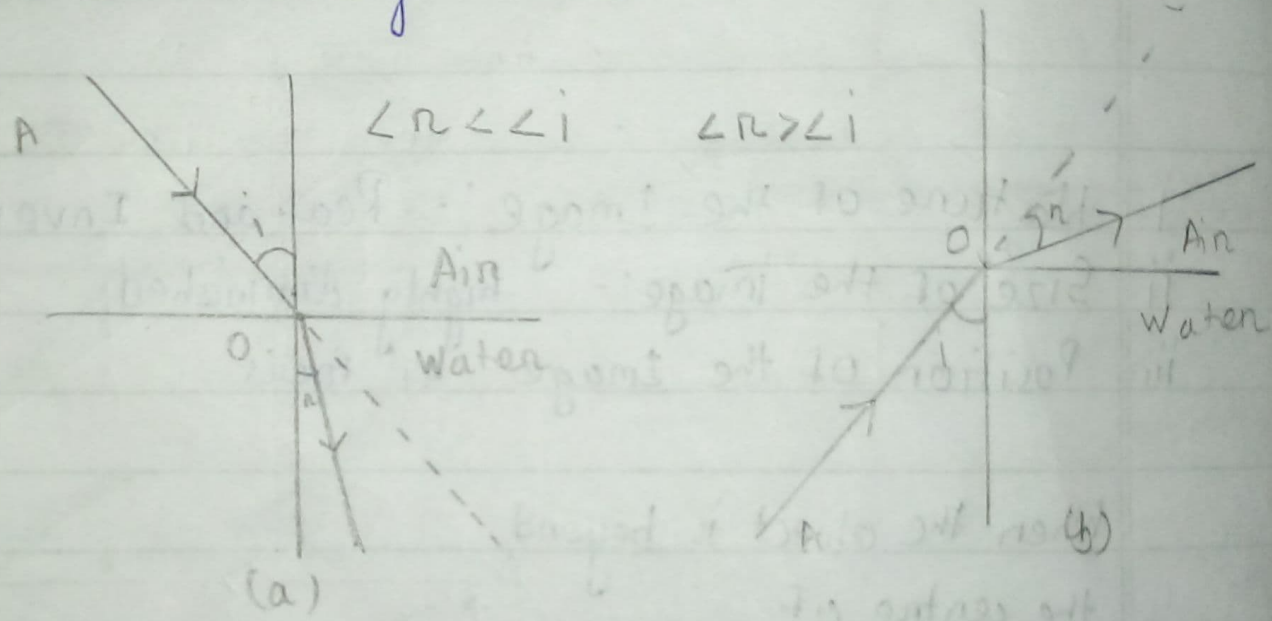
11-

A ray of light travels from a denser medium to a rarer medium. How will it bend.

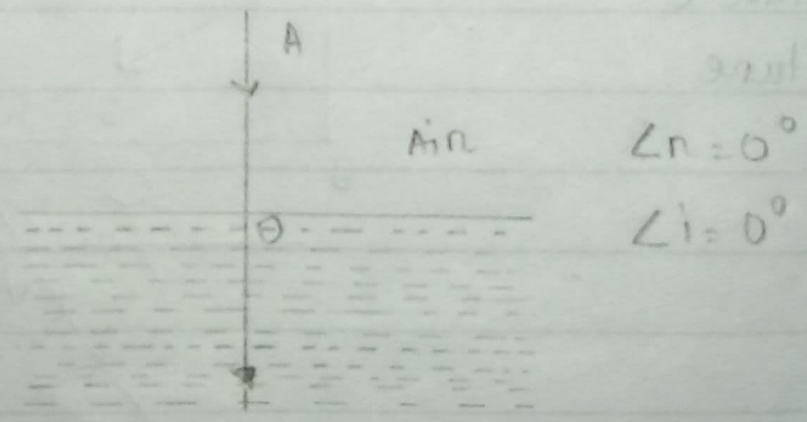
A-

A ray of light travelling from a denser medium to a rarer medium will bend away from normal.

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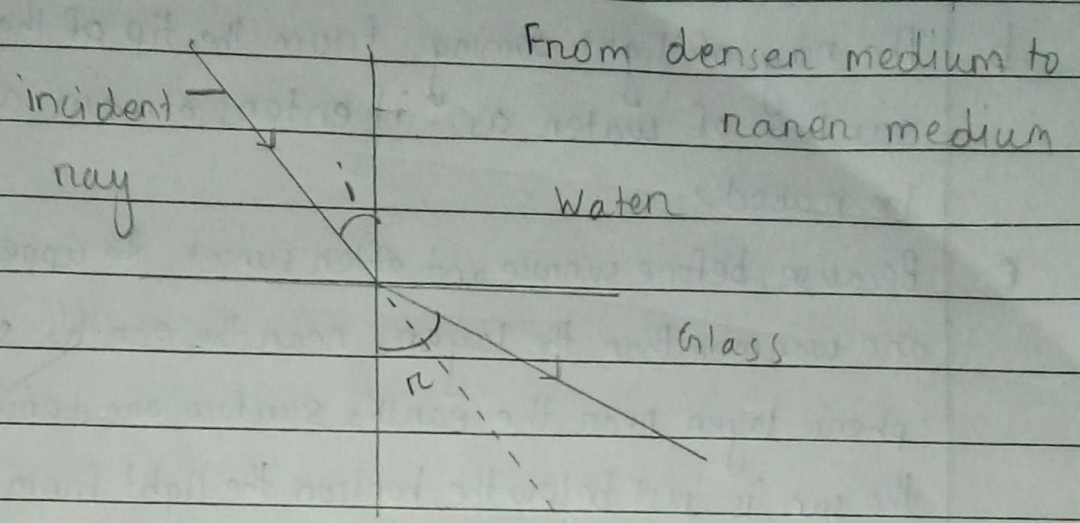


C-

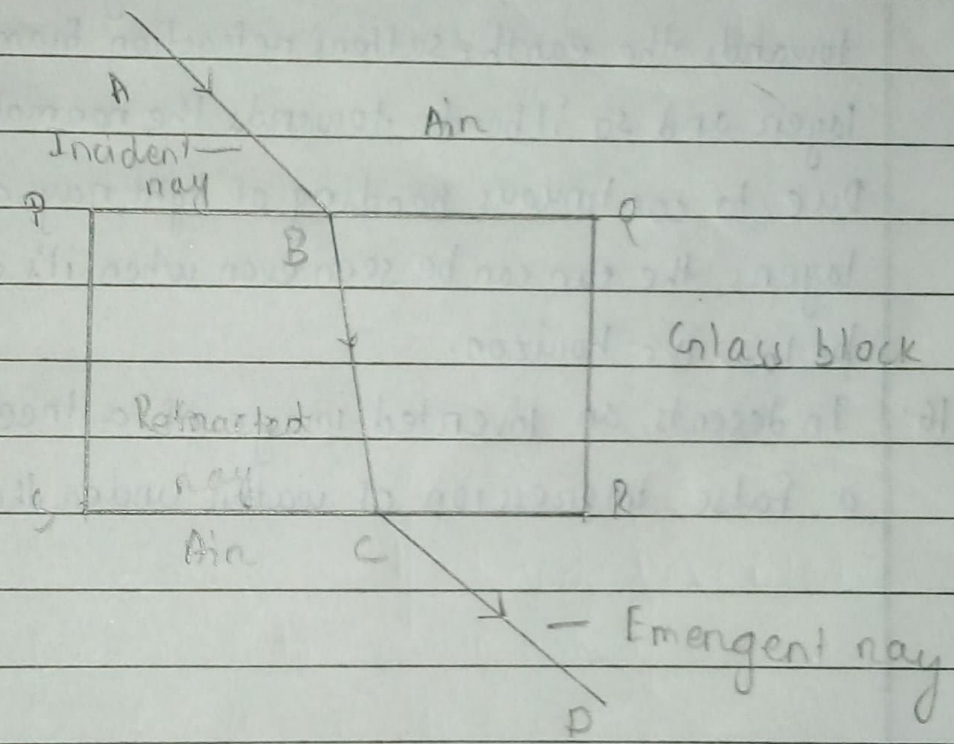


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13-



14-



15-a. A coin placed at the bottom of a vessel appears to be raised when water is poured in the vessel.

A- Because, the ray of light from the bottom of the vessel, from the coin, travelling in a straight line changes its direction at the surface of water and reaches the eye. Thus, the light ray bends as it leaves water and enters air.

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- b- The ray of light coming from the tip of the stick bends at the surface of water as it enters in air and it appears to be raised.
- c- Because, before sunrise and after sunset, the upper atmospheric layers are warmer than the layers near the earth's surface. So the atmospheric layer near the earth's surface are denser than those above. When the sun is just below the horizon the light from sun, while coming towards the earth, suffers refraction from a rarer to a denser layer and so it bends towards the normal at each refraction. Due to continuous bending of light rays at different successive layers, the sun can be seen even when it's actual position is just below the horizon.
- 16- In deserts, an inverted image of a tree is seen which gives a false impression of water under the tree. This is called ^{mirage} mirage.