Light and Optical Systems
Topic 3 - Refraction Practice Quiz

1. Refraction is the bending of light when it travels from one medium to another. What direction does the light bend when it travels from a medium of greater density to one of lesser density?

- ○ **along the normal**
- ○ **along the perpendicular**
- ○ **towards the normal**
- ○ **away from the normal**

2. When light is refracted, the angle of incidence increases and the angle of refraction ...

- ○ **depends on the intensity of the light**
- ○ **increases, depending on the material**
- ○ **decreases, but only by one half**
- ○ **increases by double**

3. Mirages cause an illusion of a watery surface. This illusion is actually ...

- ○ **water drops reflecting the light**
- ○ **water drops refracting the light**
- ○ **the sky refracted by warm air**
- ○ **the sky reflected by warm air**

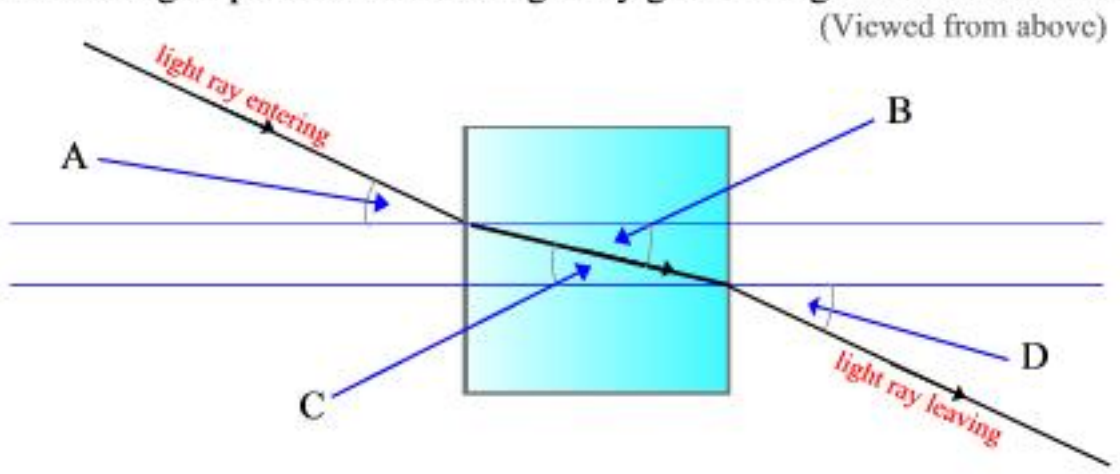
4. When light strikes a surface and is absorbed, the light ...

- ○ **changes into another form of energy**
- ○ **bounces off in many different directions**
- ○ **travels through it in a different direction**
- ○ **happens only when it is a smooth shiny surface**

5. During refraction, when the angle of incidence is doubled, the angle of refraction is ...

- ○ **also doubled**
- ○ **not necessarily doubled**
- ○ **decreased by the same amount**
- ○ **decreased by about half**

6. Label the angles produced when a light ray goes through a refraction tank.



A is the angle of _____

B is the angle of _____

C is the angle of _____

D is the angle of _____

Check your Answers

Light and Optical Systems
Topic 3 - Refraction Practice Quiz

1. Refraction is the bending of light when it travels from one medium to another. What direction does the light bend when it travels from a medium of greater density to one of lesser density?

- ○ **along the normal**
- ○ **along the perpendicular**
- ○ **towards the normal**
- ◉ **away from the normal (Text p. 204) Figure 3.27**

2. When light is refracted, the angle of incidence increases and the angle of refraction ...

- ○ **depends on the intensity of the light**
- ◉ **increases, depending on the material (Text p. 204) Figure 3.27**
- ○ **decreases, but only by one half**
- ○ **increases by double**

3. Mirages cause an illusion of a watery surface. This illusion is actually ...

- ○ **water drops reflecting the light**
- ○ **water drops refracting the light**
- ◉ **the sky refracted by warm air (Text p. 205) Figure 3.28**
- ○ **the sky reflected by warm air**

4. When light strikes a surface and is absorbed, the light ...

◉ **changes into another form of energy (Text p. 205) Table 3.1**

○ **bounces off in many different directions**

○ **travels through it in a different direction**

○ **happens only when it is a smooth shiny surface**

5. During refraction, when the angle of incidence is doubled, the angle of refraction is ...

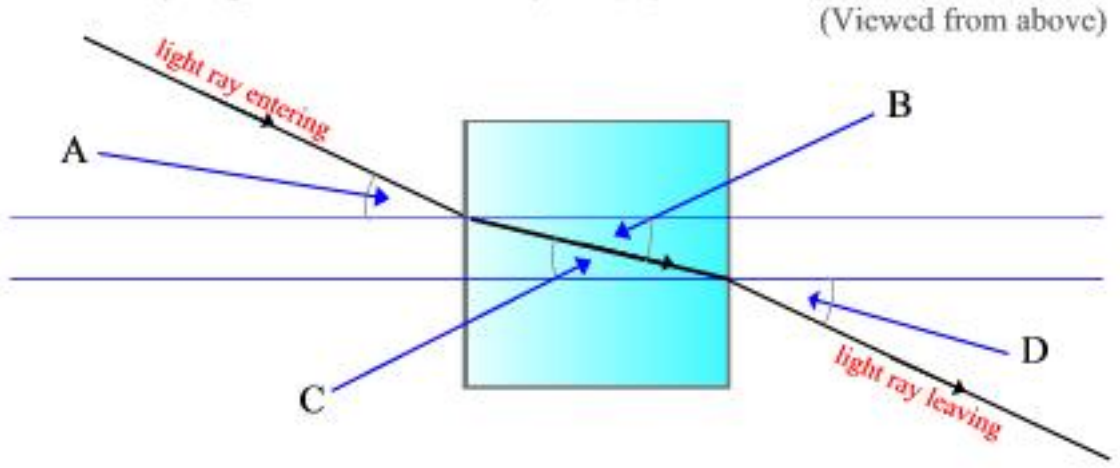
○ **also doubled**

◉ **not necessarily doubled (Text p. 216) Figure 3.35**

○ **decreased by the same amount**

○ **decreased by about half**

6. Label the angles produced when a light ray goes through a refraction tank.



(Text p.204) Figure 3.27

A is the angle of ___ **incidence** ___

B is the angle of ___ **refraction** ___

C is the angle of ___ **incidence** ___

D is the angle of ___ **refraction** ___