



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Sub: Physical Science

Class: 8

Date: 11.06.20

Duration: 40 min

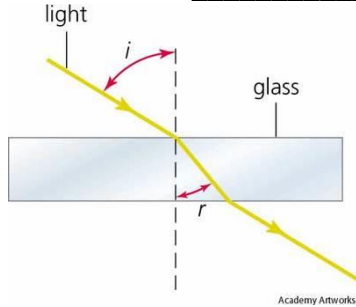
Worksheet 35

Full Marks: 15

LIGHT/LAWS OF REFRACTION

Choose the Correct options:

1. Glass has a _____ index of refraction than air.



- (a) Equal
- (b) Greater
- (c) Less
- (d) Impossible to say

2. The measure of how much light refracts is called...

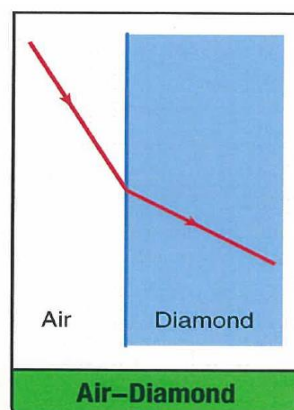
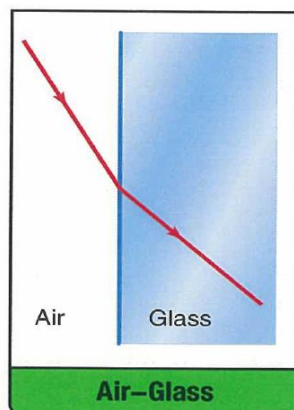
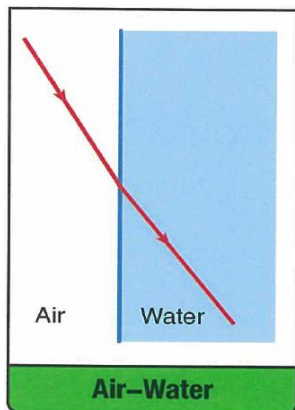
- (a) Angle of Refraction
- (b) Law of reflection
- (c) reflected ray
- (d) Index of refraction

3. This shows the phenomenon known as....

- (a) reflection
- (b) refraction
- (c) mirrors
- (d) focal point



4. How does light behave as it enters these mediums?



- (a) continue its path as straight line.
- (b) bends toward the normal
- (c) bends away from the normal
- (d) reflects

5. The velocity of light in vacuum is _____ m/s.
- (a) 3×10^8
 - (b) 3×10^{12}
 - (c) 3×10^6
 - (d) 3×10^{10}
6. Absolute refractive index of any medium is always _____.
- (a) less than 1
 - (b) greater than 1
 - (c) 1
 - (d) 0
7. The formula to calculate the refractive index is
- (a) $n=cv$
 - (b) $n=v/c$
 - (c) $n=c/v$
 - (d) $v=nc$
8. Light has the highest velocity in which medium?
- (a) flint glass $n=1.70$
 - (b) crown glass $n=1.523$
 - (c) water $n=1.33$
 - (d) diamond $n=2.45$
9. Light has the lowest velocity in which medium?
- (a) barium glass $n=1.60$
 - (b) crown glass $n=1.523$
 - (c) water $n=1.33$
 - (d) diamond $n=2.45$
10. According to Willebord Snell, light passing from air to glass will cause the light to
- (a) maintain its original speed
 - (b) accelerate while it is in glass
 - (c) increase its speed
 - (d) reduce its speed
11. Swimming pools and the ocean look shallower than they really are due to:
- (a) reflection
 - (b) dispersion
 - (c) refraction
 - (d) total internal reflection
12. Light travels through a liquid at 2.25×10^8 m/s. What is the index of the liquid?
- (a) 1.33
 - (b) 1.0
 - (c) 1.523
 - (d) 2.45

13. Light travels at 1.76×10^8 m/s through an optical medium. What is the medium?

diamond $n=2.45$

flint glass $n=1.70$

barium glass $n=1.60$

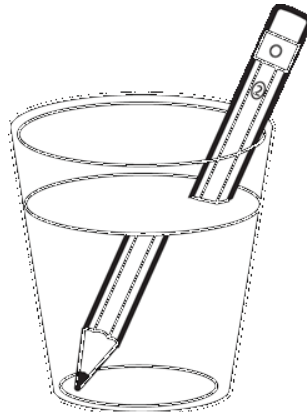
crown glass $n=1.523$

- (a) Crown Glass
- (b) Barium Glass
- (c) Flint Glass
- (d) Diamond

14. When a red light ray travels from air into a glass block, its

- (a) velocity increases and its wavelength decreases
- (b) velocity decreases and its frequency stays the same
- (c) velocity decreases and its frequency increases
- (d) velocity remains the same and its wavelength decreases

15. A student placed a pencil in a cup of water. The pencil appears broken because light-



- (a) always travels in a straight line
- (b) bends when it passes through water
- (c) makes the water in the glass evaporate
- (d) reflects the pencil on the water's surface