

Answer on Question #46390 – Physics – Mechanics | Kinematics | Dynamics

Question: refraction is a measure of the (...) as a wave passes from medium to another

- a) velocity;
- b) frequency;
- c) wave front;
- d) displacement.

Solution: refraction is the change in direction of a wave due to a change in its transmission medium. Because of change of medium, the phase velocity of the wave is changed but its frequency remains the same. This phenomenon is mostly observed when light passes from one medium to another. Refraction can be described by Snell's law, which reads

$$\frac{\sin \theta_1}{\sin \theta_2} = \frac{v_1}{v_2},$$

where v_1, v_2 are the phase velocities in the two media, θ_1 is the angle of incidence, θ_2 is the angle of refraction. Therefore, we can state that the correct answer is a) velocity.

Answer:

a) velocity.