

Question #35353

why we get many color when light passes through prism?

Answer:

The white light (sun light or light from electric lamp) consists with many colors (the colors of rainbow).

Each color is defined by wavelength.

When light passes through prism take place the phenomenon of dispersion.

Dispersion is the phenomenon in which the phase velocity of a wave depends on its frequency.

The materials of prism have the wavelength-dependent refractive index and refract different colors at different angles, splitting white light into a rainbow.

