Optics

1. Calculate the frequency of the yellow colour ($\lambda = 600$ nm) in the visible light spectrum.

2. What refraction angle has a light ray, entering from air into water under the incident angle 60º? The value of the refraction index for pure water is 1.33.

3. A light ray hits the surface of glass. What is the value of the incidence angle, when the angle between the refracted and reflected ray (γ) is 60º? The value of the refraction index for glass is 1.52.

4. Vertical line object with the height 5 mm is located 50 cm in the front of a camera lens. Find the distance of the image from the lens, when the focal length of the lens is 8 cm.

5. An object is placed 4 cm in the front of a magnifying lens. The image is magnified 5 times. Calculate the optical power of the lens.

HW: Find the angle of reflection, when a light ray hits a planar surface of water with an incidence angle 43º.