

Chapter 33 Lenses and Optical Instruments

PHYS-102

Conceptual Questions

1. Where must the film be placed if a camera lens is to make a sharp image of an object far away?
3. Can a diverging lens form a real image under any circumstances? Explain.
8. Compare the mirror equation with the thin lens equation. Discuss similarities and differences, especially the sign conventions for the quantities involved.
14. The thicker a double convex lens is in the center as compared to its edges, the shorter its focal length for a given lens diameter. Explain.
19. You can tell whether people are nearsighted or farsighted by looking at the width of their face through their glasses. If a person's face appears narrower through the glasses, is the person farsighted or nearsighted?



20. The human eye is much like a camera - yet, when a camera shutter is left open and the camera is moved, the image will be blurred. But when you move your head with your eyes open, you still see clearly. Explain.
26. For both converging and diverging lenses discuss how the focal length from red light differs from that for violet light

Problems*Placeholder*

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