

Physics 11 Chapter 18 Answers, Lenses and Mirrors p.440

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|---|---|--|
| 13) Image at C, inverted, real, same size | 21) converging lens in convex (thicker in middle), diverging lens is concave (thinner in middle) | 31) draw it out, you'll see why |
| 14) Image between C and F, inverted, real, reduced | 22) Yes, refraction depends on difference in index of refraction, therefore focal length will be increased. | 32) b) 4.0 cm, c) -8.0 mm |
| 15) Image beyond C, inverted, real, enlarged | 23) Location of image no change | 33) answers: a) An enlarged, erect image only results from a concave mirror with object inside focal length b) 32 mm |
| 16) use parabolic mirror | 24) chromatic aberration for lenses due to dispersion of light through refraction (like a prism) | 34) -9.4 cm, 0.75 cm |
| 17) Image in convex mirror always virtual, erect, reduced, and located closer to mirror than object | 25) 2.4 m | 35) Draw it out yourself! Jeesh, do I have to do everything for you?? |
| 18) can only use concave mirror with object beyond F. Convex mirror will not produce real image. | 26) 20.0 cm | 36) a) 66.7 cm, b) 1.67 times |
| 19) Use concave mirror with object beyond C, or a convex mirror with object anywhere. | 27) 75 cm | 37) a) 51 mm, b) 1.01×10^3 mm |
| 20) convex mirror, wider field of view | 28) 30.0 cm, -1.8 cm | 38) 14 cm |
| | 29) a) -24 cm, b) 9.0 cm | 39) 56 cm |
| | 30) 5 | 40) a) 60.0 mm, b) -5.0, c) -20.0 mm, d) -10.0 |