

Physics 1311
Spring 2020
Homework/Study 4 Two-sided)

Chapter 3

1. What is the primary function of an astronomical telescope?
2. An astronomer has use of a 1.4 meter telescope. He finds out that a new project requires 50 times more light gathering power than the 1.4m telescope. What diameter (minimum) telescope will he need?
3. Why do astronomers build new observatories on mountains in Chile?
4. Why do modern astronomers not look through their telescopes, but rather use instruments?
5. What problem of a glass lens is completely avoided by using a mirror to gather the light?
6. A backyard astronomer has a refracting telescope. The objective lens has a focal length of 1500mm. If he wants a magnification of 125 times, what focal length does he need in his eye lens?

