

G. Questions:

1. Define and distinguish between reflection and refraction, and explain how each phenomenon is used in telescopes.

2. In the drawings showing light rays that come from very distant objects, the rays are represented as being parallel. If two rays come from a single point, how can they ever be parallel? A drawing may be helpful.

3. If radio telescopes use the principle of reflection, why do they not require a shiny reflecting surface?

4. Why are the telescopes of the Very Large Array arranged so far apart? I would seem more convenient to have them in a tight cluster.

5. Why are all large telescopes reflectors?

6. Some of the largest telescopes in the world are located on Mauna Kea in Hawaii, at an altitude of 4.2Km. What are some of the factors that astronomers consider when deciding the location for a telescope?

7. Define magnifying power. Why do we not always use the highest magnification available?

8. Sketch a Newtonian reflecting telescope, showing the relative positions of the primary mirror, the secondary mirror, the eyepiece, the eyepiece, and the image produced by the objective.

9. What is the primary advantage and disadvantage of locating a telescope on Space?

10. What is interferometry, and what is it's advantage?

11. What is CCD and how has it improved the telescope technology?

