

Physics 1311
Spring 2020
Quiz #1 Review Notes

1. Be sure you can do a calculation using Kepler's 3rd Law.
2. Be sure you can do a Doppler calculation. Use $\Delta\lambda$ divided by λ known. For star velocities you expect kilometers per second in the hundreds.
3. Understand Kirchhoff's Laws about what kind of source produces what kind of spectrum.
4. Be thoroughly familiar with the Moon phase/orbit diagram. You will need this to figure out the answers to Moon phase and phenomenon questions.
5. Be sure you can do a parallax calculation correctly. Distances will be in parsecs and should be less than 100 parsecs.
6. Understand and be able to work with retrograde motion of planets.
7. Review the properties of lenses that you graphed in Lab 3.
8. Understand the geographic, geocentric celestial, and heliocentric (ecliptic) coordinates.
9. Distinguish and describe meteors, meteoroids, and meteorites.
10. Understand the Solar System's physical properties in Ch. 4
11. Make simple use of $F=ma$ and Newton's gravity law ($F=Gm_1m_2/r^2$).
12. Know the general properties of the two groups of planets in the Solar System.
13. Be able to use simple geometry, such as radius, diameter, circumference, and area of a circle.
14. Understand the fundamentals of measurement error (Lab 1).
15. What are equinoxes and solstices?

Try to use sanity checks wherever you can; they can save you from really dopey errors.