

Problem Assignments for Unit 4

Unless otherwise indicated, problems are from Wolfson. “**Supp**” refers to chapters in the supplementary reading and “A22” refers to the additional problems that are at the beginning of the supplementary reading.

Assigned Problems for Wednesday, December 4

A86, A88; **CH 8**: 5, 11, 12, 15, 19, 20, 43, 45, 47

Notes: For **CH 8 #19**, do not look up and use the radius for geosynchronous orbit. This is given in Example 8-3 in the reading, but you need to be able to do the problem without it; i.e., do **CH 8 #19** using Newton’s 2nd Law and the Law of Universal Gravitation.

Answers: **CH 8 #12** $2.73 \times 10^{-3} \text{ m/s}^2$; **CH 8 #20** 1.87 years; **A86**: 1106 klorvm; **A88**: See calendar page for answers.

Assigned Problems for Friday, December 6

A65; **CH 8**: 25, 27, 29, 61; **Supp CH 11**: 1, 2, 3, 4

Notes: For **CH 8 #25**, calculate the *kinetic energy* needed, not the total mechanical energy. For **CH 8 #29**, use conservation of energy (with $E = 0$) instead of the canned escape velocity formula.

Hand-In Set #10 Due Monday, December 9, 4:30 pm

A63, A77; **CH 8**: 16, 18, 26, 28, 56, 70; **Supp Ch 11**: 6, 7

Assigned Problems for Last Lecture

Supp CH 11: 5, 8, 9, 10;