Name _____

**Homework Assignment #14** due in class Friday December 9.

Staple this cover sheet in front of your solutions.

Write the requested answers on this sheet, and do the detailed solutions on your own paper.

[76] Problem 8.19 ★★

Answer: The height when it crosses the y axis is

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[77] Problem 8.25 ★★★

This is a computer problem. Turn in the programs and plots.

Answer: What is $r_{min}$ in part (b)?

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[78] Problem 8.27 ★★★

Answer: What are c, ε and δ ?

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[79] Problem 8.28 ★

Answer: No answer is required here.

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[80] Problem 8.34 ★★

Answer: No answer is required here.

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[80x] NASA has sent satellites to the planet Mars. The method is to put the satellite into a Keplerian orbit whose perihelion is at the position of the Earth and whose aphelion is at the position of Mars. The satellite does not travel to Mars under rocket power; it just moves under the influence of the Sun's gravity. Calculate the number of days the trip to Mars will take.

Answer: The number of days is

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**Final Exam:**
**Wednesday, Dec 14 2016**
**12:45pm - 2:45pm**
**in 1300 Biomedical & Physical Sciences**