

Problem Set 2

(due Wednesday, January 22, 12:30 pm)

1. Problem 1.18, page 22. These idealized one-dimensional calculations merely give the correct orders of magnitude when applied to realistic problems, so please don't state your answers to an excessive number of decimal places.
2. Problem 1.19, page 23.
3. Problem 1.20, page 25. Be sure to make a screen capture as soon as you see the message "Target 4 of 4 matched!", then print and attach the screen capture.
4. Problem 1.23, page 25.
5. Problem 1.24, page 25.
6. Problem 1.26, page 27. Part (h) is optional (extra credit).
7. Problem 1.27, page 29.
8. Problem 2.5, page 40. See the back of this page for an enlarged copy of the energy graph. Please draw the wavefunctions underneath, using the same horizontal scale.
9. Problem A.27, page 222. This problem is intended to refresh your memory of eigenvalues and eigenvectors, in preparation for Section 2.3. (You can look up the meaning of "Hermitian" in the preceding text if you like, but for a real-valued matrix it's the same as "symmetric".)

