Due by 5 p.m. on Friday, December 6. Partial credit will be available for solutions submitted by 5 p.m. on Monday, December 9.

Answer all questions. To gain maximum credit you should explain your reasoning and show all working. Please write neatly and include your name on the front page of your answers.

1. Shankar Exercise 12.5.7.
4. Shankar Exercise 12.6.9, with the following added to the end:
   Find the minimum potential depth $V_0$ needed to produce a bound state of angular momentum $l = 1$.