Physics 852 **Problem Set 7** **Spring 2023**

NOTE: All problem numbers from Sakurai correspond to the 3rd Edition.

1. Sakurai 7.3

2. Sakurai 7.7
   In this problem, when it asks for the total spin, answer the following question:
   Is it an eigenstate of $S^2 = (\vec{S}_1 + \vec{S}_2 + \vec{S}_3)^2$ and $S_z = S_{1z} + S_{2z} + S_{3z}$, and if so, what are the corresponding total-spin quantum numbers, s and m_s?

3. Sakurai 7.11