

Homework #5

(due Wednesday, February 18, 2026)

1. (10 pts) McIntyre 10.15
2. (10 pts) McIntyre 10.23
3. (10 pts) McIntyre 10.24
4. (10 pts)
 - (a) McIntyre 11.9
 - (b) McIntyre 11.7
5. McIntyre 11.4

6. Reading: Ch. 11 of McIntyre.

The following questions are for practice (not for submission):

1. McIntyre 11.10
2. Show the following:

$$[J_z, J_{\pm}] = \pm \hbar J_{\pm}$$

$$J \cdot J_{\pm} = \mathbf{J}^2 - J_z^2 - \hbar J_z$$