

Number:

Name:

Exercise 5 (deadline: June 23, 10:30 am, 2026)

- 1) Show Eq. (167).
 - 2) Verify $|\uparrow\rangle\langle+| + |\downarrow\rangle\langle-| = H$ using the matrix representation.
 - 3) Express $H|+i\rangle$ in terms of $|-i\rangle$.
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