Math 2D − Suggested Homework 3

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Reading: Sections $12.4 - 12.6$. In 12.4, ignore the section on Torque. Sections 12.5 and 12.6 are the heart of this first half of the course, so make sure how to understand all the examples in section 12.5 and **memorize** the 6 formulas in Table 1 in section 12.6. Seriously, do yourself a favor and do that! It'll make the rest of your 2D and 2E lives *much* easier.

Note: In the problems in 12.6, you don't need to use traces if you find the formulas in Table 1 easier.

- **Section 12.4:** 1, 13, 17, 19, AP

- **Section 12.5:** 4, 5, 9, 12, 17, 20, 24, 28, 31, 45, 53, 59, 71, 74

- **Section 12.6:** 3, 5, 11, 15, 19, $21 - 28$, 35, 38, 43

Additional Problem: Show that $\mathbf{a} \times \mathbf{b}$ is always orthogonal fo $\mathbf{b}$.

Hint: It's similar to the proof of Theorem 8 on page 816.