In Section 2.2, please do the following ten problems.

Exercises 1, 5, and 7. They're all closely related.

Exercise 9.

Exercise 35. The exercise is asking you to explore what happens when you try to invert a 2×2 matrix

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$$

where $ad - bc = 0$. As I said in class, you fail. But why? The reason is easiest to understand if you break it into two cases: the case where a and b are both 0, and the case where they're not both 0. The exercise is asking you to describe what happens in each case.

Exercises 41, 42, 47.

Exercises 49, 51. You will have to read the top third of page 113, about the deflection of an elastic beam. In Exercise 49, compute the answer. In Exercise 51, don't compute the answer, but do explain in English how you would compute the answer, if you had to.

Finally, try to memorize the formula for the inverse of a general 2×2 matrix. Also, if you are not comfortable with inverting 3×3 matrices by hand, then practice that skill more. (But don't submit your practice for grading.)