**Due date:**
Friday, 2/5, **due 6pm, submit through Canvas**.

**Instructions:**
Students are encouraged to work together and discuss the homework problems, however each student must write up the solutions in their own words. Homework solutions should be well-explained, except True/False questions unless requested otherwise.

The format of HW is not restricted, but the PDF file is the preferred one.

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**Problem 1:** If $A$ is a square, invertible matrix satisfying $A^2 + A + I = O$, where $O$ is a zero matrix. Show $A^{-1} = A^2$.

**Problems in [1]**
p30, problems 1.4.21(b)
p34, problems 1.5.3(d)(f), 1.5.12, 1.5.20(b) (use the formula in part (a) to do it)
p39, problems 1.5.24, 1.5.25(e)

# References

[1] Peter Olver and Chehrzad Shakiban, Applied Linear Algebra, 2$^{\text{nd}}$ Edition