Projection Thm
Plan?

- Normed Linear space?
- Inner Product spaces + Examples
- Cauchy Schwarz Ineq.
- Norm on X
- $\langle x, y \rangle = 0 \ \forall y \in X \Leftrightarrow x = 0$
- Parallelogram Law (HW))
- Pythagorean Thm (HW?)
- $x \perp y, \quad x \perp S, \quad x \perp S \Leftrightarrow x \perp [S]$
- Pose min. distance of or approx problem
- Do Pre-Projection Thm
- Do G-S. Get $X = M \oplus M^\perp$
- Do Projection Thm.
- Define Projection Operator
- Do Examples