32A Killip Homework 1 Due Friday, Oct. 6

- Let $\vec{a}$ and $\vec{v}$ be non-zero vectors. Show that the point on the line $\vec{a} + t\vec{v}$ nearest the origin is given by $\vec{a}_{\perp\vec{v}}$. (Use your knowledge of one-variable calculus.)
- Find all unit vectors $\vec{v}$ that are perpendicular to the vector $\left(\begin{smallmatrix} 5 \\ 12 \end{smallmatrix}\right)$.
- Section 13.3: 77 and 78.
- Show that the Hint in Problem 13.3.97 is a true statement.
- From Section 13.4: 10, 12, 26, 30, 36, and 44.
- From Section 13.5: 4, 18, 22, 26, 30.