Fall, 2011

# MATH 3500(H)
# PROBLEM SET #8

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DUE Wednesday, October 12, 2011.

*Problems to work but not hand in*:

§3.5: #7a.

§3.6: #2a,b.

§4.1: #3b,f, 8, 9.

*Problems to turn in*:

WeBWork Homework 8

§3.5: #2 (2), 4* (3), 6 (3).

§3.6: #1 (3), 4 (2).

§4.1: #3g (3).

**A.** (3) Find all the unit vectors $\mathbf{x} \in \mathbb{R}^3$ that make an angle of $\pi/4$ with $\begin{bmatrix} -1 \\ 1 \\ 0 \end{bmatrix}$ and an angle of $\pi/3$ with $\begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$.

*Challenge problems* (Turn in separately):

§3.5: #10 (3), 14 (4), 15 (6), 16 (2).

§3.6: #7† (4), 8 (1), 9 (2), 11 (3).

*It might be helpful to think about two cases, one being that $\mathbf{F} = \mathbf{0}$.

†Particularly recommended for physics and engineering majors.