This Week in SP351:2001: Homework, etc.

Homework must be submitted stapled in assignment groupings.

Always attempt to complete the readings before class. You are responsible for reading 10 pages past the current lecture. You may not understand the material completely, but you must read it prior to lecture.

** Problems to submit on the date listed: **

Week of 06 Sep

Monday	**Read carefully FS 1-23, 28-32, 38-42**
	Read the problem statements for 1-10 and 15-18
	Read FS 23-28, 32-38
Wednesday	**Read carefully CN1-8, 12-14, Read CN8-12, Boas 43-54, 58-72**

Week of 13 Sep

Monday:	**CN 2, 4, 5, 7 Read the Matrices handout**
Wednesday	**Auxilary Problems: A1, A2 (see Wk03 sheet); Boas Prob. pg. 124: 2, 4**
	For # 2 compute $\mathbb{AB}, \mathbb{BA}, \mathbb{A}+\mathbb{B}, 5\mathbb{A}, 3\mathbb{B}. 5\mathbb{A}-3\mathbb{B}$ and $\mathbb{AB}-\mathbb{BA}$ only
Friday:	**A3, A5**

Week of 20 Sep

Monday	**A4, A6**

HOUR EXAM I Monday 27 Sept 2004

B: => Boas Problem MD: => Matrices and Determinants
A: => Auxiliary Problem - statement on this page !
Hints

A3.) Consider the permutation symbol $\varepsilon^{*\wedge\#}_{ijk}$. Give the values of:
$\varepsilon^{*\wedge\#}_{\wedge\wedge\#}$, $\varepsilon^{*\wedge\#}_{\#*\wedge}$, $\varepsilon^{*\wedge\#}_{\wedge*\#}$, $\varepsilon^{*\wedge\#}_{\#\wedge*}$ and $\varepsilon^{*\wedge\#}_{*\#\wedge}$.

A4.) a.) Compute the determinants of the matrices

$$\begin{bmatrix} 1 & -5 & 2 \\ 6 & 6 & 2 \\ 2 & 1 & 5 \end{bmatrix} \qquad \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} \qquad \begin{bmatrix} 2 & 2 \\ 3 & 4 \end{bmatrix}$$

b.) Compute the determinants of the transposes of those matrices.

A5.) List nine special terms related to matrices.

A6.) Expand the relation $\sum_{j,k=1}^{3} \varepsilon_{2\,jk}\, A_j\, B_k = \sum_{j=1}^{3} \sum_{k=1}^{3} \varepsilon_{2\,jk}\, A_j\, B_k$. Replace the subscripts using the substitutions $1 \rightarrow x$; $2 \rightarrow y$; $3 \rightarrow z$. Compare with $\left[\vec{A} \times \vec{B}\right]_y$.

9/15/04