MATH 2418

Exam 2 Reviews

2.7

Transposes and Permutations

**Book**

Chapter main points

1. The transposes Ax and AB and A-1 are xTAT and BTAT and (AT)-1
2. The dot product is x . y = xTy and outer product is yTx
3. The idea behind AT is the Ax . y = x . ATy because (Ax)Ty = xTATy = xT (ATy)
4. A symmetric matrix has ST = S and the product ATA is always symmetric
5. A orthogonal matrix QT=Q-1
6. Permutation matrix has same rows as I, in any order.
7. The Px puts the components x 1 x2 …. xN in that order. And PT = P-1

Facts

Rules

**Class**

**Recitation**