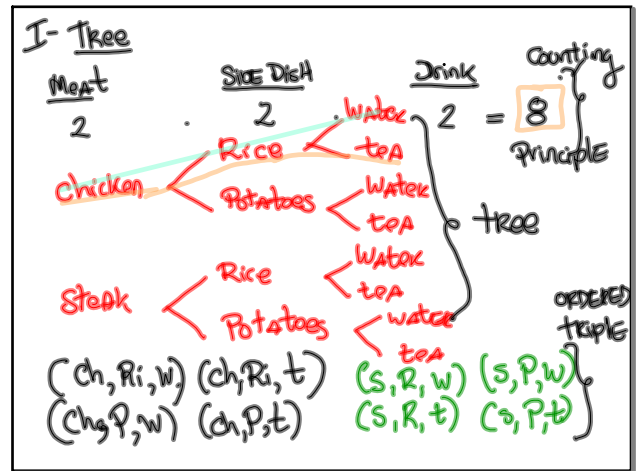


WEDNESDAY JANUARY 4, 2012
 HW#27
 Aim: How do we find the number of permutations of objects in a set?
 YH/2012 - Notebook, Textbook, Folder, Final Exam, Homework.
Do Now: In a Restaurant you can choose one of each for your meal.
 Meats: Chicken or steak.
 Side Dish: Rice or potatoes.
 Drink: tea or water.
 How many possible meals are there?



Jan 4-9:34 AM

Jan 4-9:46 AM

ex] A sandwich can be made with 3 different types of bread, 5 different meats, and 2 types of cheese. How many types of sandwiches can be made, if one sandwich consist of one each.

BREAD: 3
 Meat: 5
 cheese: 2 = 30

B₁
 B₂
 B₃

ex3] A voice mail system password is one letter followed by a 3 digit number less than 600. How many different voice mail passwords are possible?

letters: 26
 digits: (000, 001, 002, 003, 004 ... 599)
 26 * 600 = 15,600

Jan 4-10:04 AM

Jan 4-10:14 AM

II - Permutations.

i) Symbols $!$ (Factorial)
 ${}_n P_r$ (Permutations)

ex) A family of 3 want to sit in 3 chairs together at the same time. How many outcomes are there?

Chair 1	Chair 2	Chair 3	
□	□	□	= 6
1	2	3	
2	1		
3			

$3! = 3 \cdot 2 \cdot 1 = 6$
 ${}_3 P_3 = 3 \cdot 2 \cdot 1 = 6$

Jan 4-10:23 AM