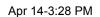
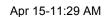
**12-8 Combinations Combinations**-where order is NOT important formula:  ${}_{n}C_{r} = \underline{n!}$  r!(n-r)!Ex5a) 9 members need to form 3 committees with 3 people on each committee.  ${}_{9}C_{3} = \underline{9!} = 84$  combinations 3!(9-3)!If three people were selected as president, v.p., and secretary, how many would there be?

 $_{9}P_{3} = 9!/(9-3)! = 504$ 



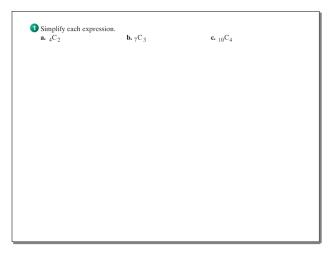
Ex5b) 20 kids on the team and 5 awards are given out at the banquet, how many different ways could it be done.(mvp, mtd's, rushing,etc.)

$$_{20}C_{5} = \underline{20!} = 15,504$$
  
5!(20-5)!



Try: How many different poker hands can you have (your given 5 cards and there is 52 cards in a deck)?

Max	16 10:00 DM	
iviay	16-12:20 PM	



May 16-12:29 PM