B-14 Permutations and Combinations

 $\underline{\text{Example 1}} \ \, \text{Find (A)} \, \, P_{10,3} \quad \text{ and (B)} \, \, C_{13,4} \, \, \, \text{or} \, \, \binom{13}{4}.$

Solution (A) and (B):

The quantity $P_{10,3}$ can be found by using the definition $\frac{10!}{7!}$ or using the built-in function nPr.

Similarly for $C_{13,4}$ or $\binom{13}{4}$.

Keystrokes Screen Display Explanation Return to the Home 2nd QUIT Screen and clear. F1 :Tools 8 :Clear Home CLEAR Choose nPr and press ∶Number ENTER . 2nd MATH 7 :Probability RAD AUTO FUNC 0/30 Enter the numbers separated by a comma and press ENTER . 2 :nPr(10 , 3) Repeat for nCr. ENTER FUNC 0/30 The results are: 2nd MATH F1+) F2+ F3+ F4+ F5 F6+ Too1s|A19ebra|Ca1c|Other|Pr9mIO|C1ean Up $P_{10,3} = 720$ 7 :Probability $C_{13.4} = 495$ 3 :nCr(13 , 4) •nPr(10,3) 720 ENTER 495 FUNC 2/30 RAD AUTO