

- (2) Show that:
- ${}^m C_r + {}^m C_{r+1} = {}^{m+1} C_{r+1}$
 - ${}^m C_r = {}^m C_{m-r}$
 - ${}^n C_3 = 84$, if ${}^n C_3 = {}^n C_4$
 - ${}^m P_r = {}^{m-1} P_r + r \cdot {}^{m-1} P_{r-1}$
- (3) Evaluate: (a) ${}^5 C_4$ (b) ${}^{100} C_{98}$
- (4) Evaluate using formula: (a) ${}^5 C_3$ (b) ${}^7 C_2$
- (5) Find n if ${}^n C_8 = {}^n C_5$
- (6) Find n given that ${}^{n+1} C_3 = 4 \times {}^n C_2$
- (7) If ${}^n P_r = 336$, and ${}^n C_r = 56$. find n and r
- (8) A school has 8 teachers. One of them is the headmaster (a) How many committees of 5 can be formed? (b) How many of them have the headmaster as a member.
- (9) There are 7 girls in a classroom. Ashabi is one them. In how many ways a committee of 5 be formed so as to exclude Ashabi?
- (10) There are 8 members in a club of which A and B are two members. A committee of 5 is to be formed. How many of these will include A and exclude B?
- (11) There are 5 bowlers and 10 batsmen in a cricket club. In how many ways can a team of 11 be selected so that the team contains exactly 3 bowlers?
- (12) From 8 gentlemen and 5 ladies, a committee of 6 is to be formed. In how many ways can this be done so that the committee contains at least 3 ladies?
- (13) How many permutations are there of the word:
- Calculator
 - Mathematics
 - Assumption
- (14)
- How many numbers between 1,000 and 10,000 can be formed out of the figures 0, 4, 5, 6, 7, 8, if no figure is to appear more than once in any number?