

Permutations and Combinations

Quiz/Homework

1. The Academic Decathlon class at St. Jordan's High School has 15 people in it: 3 are Honor students, 8 are Scholastic students, and 4 are Varsity students. How many different teams can be made? (Recall that a team must have 2 students from each level).
2. Twelve dots are drawn on a piece of paper. How many triangles can be drawn that connect three of the dots? (Assume none of the points are collinear).
3. From 6 boys and 4 girls, a group of 5 students is to be formed. In how many ways can this be done, if at least one girl must be in the group?
4. How many words with 4 consonants and 3 vowels can be made from 12 consonants and 4 vowels, if all the letters are different?
5. What is the value of $\binom{n+1}{n}$?