

# Permutation or combination?

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## Questions: Permutation or Combination?

1. **Student Club Officers:** A student club needs to elect a president, vice president, and secretary from a group of 7 members. In how many ways can these three officers be chosen?
2. **Selecting a Research Team:** A professor wants to choose 4 students out of 10 to join her research team. In how many ways can the students be selected?
3. **Forming a Study Group:** A group of 5 students wants to form a study group, but they will sit in a specific order around a round table. How many different seating arrangements are possible?
4. **Assigning Dorm Rooms:** 10 students are applying for 5 single rooms in a dormitory. The rooms are identical. In how many ways can 5 students be assigned a room?
5. **Choosing Books for a Course:** A literature professor needs to select 3 books out of 8 for a course syllabus. The order in which the books are read does not matter. How many different selections are possible?
6. **Organizing a Science Fair:** In a science fair, 6 projects are submitted. Three prizes will be awarded: first place, second place, and third place. In how many ways can the three prizes be awarded?
7. **Scheduling Speakers for a Conference:** A conference organizer needs to schedule 4 speakers for different time slots throughout the day. In how many ways can the organizer schedule the speakers?
8. **Forming a Mixed Committee:** A new committee is to be formed with 2 faculty members and 3 students from a pool of 6 faculty members and 8 students. How many different committees can be formed?
9. **Arranging Books on a Shelf:** A student has 7 different books and wants to arrange them on a shelf. In how many different ways can the books be arranged?