

Example:

In a class, there are 27 boys and 14 girls. The teacher wants to select 1 boy and 1 girl to represent the class for a function. In how many ways can the teacher make this selection?

Solution:

Here the teacher is to perform two operations:

- (i) Selecting a boy from among the 27 boys and
- (ii) Selecting a girl from among 14 girls.

The first of these can be done in 27 ways and second can be performed in 14 ways. By the fundamental principle of counting, the required number of ways is  $27 \times 14 = 378$