

Example:

In an examination there are three multiple choice questions and each question has 4 choices. What is the number of ways in which a student can fail to get all answer correct?

Solution:

There are three multiple choice question, each has four possible answers. Therefore, the total number of possible answers will be  $4 \times 4 \times 4 = 64$ . Out of these possible answer only one will be correct and hence the number of ways in which a student can fail to get correct answer is  $64 - 1 = 63$ .