Example 4 - sample space reduction An urn contains 10 white, 5 yellow and 10 black marbles. A marble is chosen at random from the urn and it is noticed that it is not a black one. What is the probability that it is a yellow one?

Example 5 - Sample Space Reduction: A child mixes 10 good and three dead batteries. To find the dead batteries, his father tests them with one by one and without replacement. If the first four batteries tested are all good what is the probability that the fifth one is dead?

Example 6 - Sample Space Reduction: A deck of cards is dealt equally to four players. Assuming that two players receive 8 spades among them what is the probability that one of the other two players gets 3 of the remaining 5 spades?

Example 7 - Multiplication Rule X is undecided as to whether take a French course or a Statistics course. Although she actually prefers Statistics, X estimates that her probability of getting an A in French would be 1/2 whereas it would be only 1/3 in Statistics. If X decides to make up her mind based on the flip of a coin what is her chance to get an A in Statistics. What is her chance to get an A?