

A machinist constructed a safe, and fabricated it with a lock that can be opened by dialing 2 letters followed by 3 numbers, such as MJ246. How many different combinations are possible for this safe?

What is the probability of opening the safe on your first attempt?

What are the odds in favor of opening the safe on your first attempt?

What are the odds against opening the safe on your first attempt?

A carpenter's work belt had some random items in it. There were three different pencils, two different tape measures, and four utility knives. How many ways can the carpenter reach into the belt and grab one tape measure, one pencil, and one knife?

Use Permutations (nPr) or Combinations (nCr) to solve the following:

An instructor decided he was going to enter some of his students in a Skills Competition and was allowed to bring 3 students from his class of 11 students. How many different groups of competitors could he assemble?

When they arrived at the competition, they found that a total of 18 students were competing and they were giving away cash prizes for 1st, 2nd, and 3rd place. How many different ways could the prize winners be chosen?