

# ACM Summer Challenge 2020

## Elementary and Intermediate Mathematics

Mathematics is an important part of competitive coding. Some questions are based on mathematical concepts and can only be solved if you know the math behind the question. Some specific topics of mathematics that are stressed upon in competitive coding are **Permutation and Combinations, Set theory, Number theory, Geometry, Specific theorems by Euler, Probability, Statistics and Fast Fourier transforms**(the last one is rarely used).

Below are the links that will help you understand these concepts more clearly and make you conceptually sound:

<https://cp-algorithms.com/> (My personal favourite website for all algorithms/concepts)

<https://www.geeksforgeeks.org/math-in-competitive-programming/>

<https://www.topcoder.com/community/competitive-programming/tutorials/mathematics-for-topcoders/>

For those who like to use what they learn:

<https://codeforces.com/problemset?tags=math>

<https://codeforces.com/problemset?tags=geometry>

<https://codeforces.com/problemset?tags=number+theory>

The links for the problem provide questions with varied difficulties. Please solve them in their non decreasing order of difficulty.

**We, the ACM Core Team, hope that you are safe and sound amidst the pandemic and are enjoying the questions. Remember, it's more important to understand the questions and their concepts than solving them blatantly.**

**Stay safe, stay healthy and keep coding!**