Course name: Introduction to Counting & Probability

Course description

 "Introduction to Counting and Probability", is designated for students who have completed Algebra 1 course, but are not ready to take "Intermediate Algebra" course. This course, Counting and Probability includes basic and intermediate counting concepts, including casework, multiplication, permutations, combinations, Pascal's triangle, probability, combinatorial identities, and the Binomial Theorem.

This course is specifically designed for high-performing students and draws material from many programs for top middle school students. Our goal is to help students to develop more by learning to solve problems they haven't seen before.

This is one semester, 16 weeks course.

Who should take this course

Students are ready for this class if they have mastered linear equation and related, quadratic equation and related, fraction equation and related, graphs of special relations, such as linear function, quadratic function, exponent function, etc. Students who have completed a typical Algebra 1 course are ready for this section.

The requirement for students who register this course

In general, students in grade 7 – 9 are eligible to register this course. All students who want to take this course should pass the evaluation test called "Are You Ready?". Besides, students who are interested in this course should take another test as well. It is called "Do You Know?" Both tests would give you an idea of whether this course is fit to you and meets your requirement. Test questions are posted in NCLS website.

Even though successful registration to the class, the students may be asked to change to appropriate class if the student has difficulties to understand the contents, or is not able to complete practices or assignments, or couldn't pass the quiz test, etc.

Text book:

AOPS, "Introduction to Counting & Probability", by David Patrick.

Purchase textbook online: https://artofproblemsolving.com/store/item/intro-counting

Course contents:

1. Lists, Venn Diagrams, Addition, Multiplication
2. Casework, Constructions and Restriction