ACES MATH: Algebra (I)
Course Description

This is the first part of a course on elementary algebra, a mathematical language that we use to describe patterns. The focus of this course is to introduce some fundamental concepts in algebra, such as variables, expressions, functions, equations and inequalities. Fundamental tools for study analytical geometry, such as the planar coordinate system, will also be introduced.

Prerequisite. Students who take this course should have taken the ACES math course: Prealgebra. A placement test is required for anyone who did not take the prerequisite course.

Textbooks. We recommend the following textbook for students to read:

```
Prealgebra and Introduction to Algebra, 3rd Edition
Richard N. Aufmann and Joanne S. Lockwood
Brooks/Cole, 2014.
```

Main Topics. The main topics of this course include: (i) variables and expressions; (ii) one-variable functions; (iii) one-variable algebraic equations and inequalities; and (iv) fundamentals of geometry.

Homework. Learning mathematics is very similar to learning to play piano: you can not learn anything unless you practice a lot, and if you practice a lot you will be good at it. There is no shortcut here. Therefore, we will have a large (but still reasonable) amount of homework for the students after each lecture.

Notes on Competition Track. Students on the competition track are expected to work on harder (meaning more difficult and in larger amount) homework sets.

Communications. Students and their parents are encouraged to communicate with the instructor on issues directly related to the course, through the email address aces.math.info@gmail.com; For other issues related to the ACES after school program, please email aces4kidsinfo@gmail.com .