

Math 7 – Math in Focus

Course Syllabus

Math in Focus is the U.S edition of the Singapore’s top-ranking math program. It follows the pedagogical framework that includes emphasizing concept mastery, a concrete-to-pictorial-to-abstract approach, metacognitive reasoning, and the use of model drawing to solve and justify problems. *Math in Focus* is a mastery program aligned with the Common Core State Standards (CCSS) that blends the following notions to promote student success:

- **A focused and coherent syllabus:** Math in Focus introduces fewer topics in each grade, but teaches them to greater depth. Topics are taught to mastery, so they build from year to year across grade levels without repetition.
- **A visual and balanced approach:** Math in Focus is highly visual, following a concrete-to-pictorial-to-abstract progression.
- **A focus on numbers and operations:** Math in Focus is sequenced in a way that ensures students develop and maintain strong number sense.
- **An emphasis on problem solving using model-drawing:** Math in Focus utilizes model-drawing strategies that help students solve both routine and non-routine problems.
- **A recognition of the importance of attitudes and metacognition:** The Math in Focus framework emphasizes the importance of attitude and the ability to self-monitor while problem solving to achieve success in math. It provides students with the tools they need to break down complex concepts and problems, which in turn develops positive attitudes.

Topics that will be covered in 7th grade are:

- Developing problem-solving skills and strategies
- Evaluating and simplifying algebraic expressions
- Solving algebraic equations
- Using proportional reasoning
- Constructing geometric figures
- Finding volumes and surface areas of cones, cylinders, and spheres
- Graphing data sets and analyzing statistical sampling methods
- Identifying events, outcomes, and sample spaces