

# Math

## What Every Child Should Know 7th Grade

In 7th grade, your child will grow in skill and understanding as he or she continues the previous grade's work in proportional relationships, equations, and positive and negative numbers. These topics will remain a major emphasis throughout the middle school years and into high school. A good command of rates and proportional relationships, including percentages, is also an important life skill.

- Developing understanding of and applying proportional relationships
- Developing understanding of operations with rational numbers and working with expressions and linear equations
- Solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume
- Drawing inferences about populations based on samples.

### ***Talking To Your Child's Teacher***

When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In 7th grade, these include:

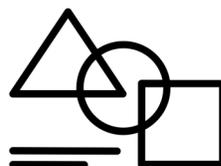
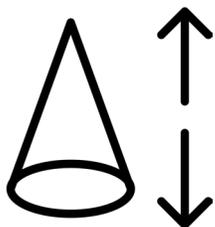
- Analyzing proportional relationships
- Arithmetic with positive and negative numbers
- Solving equations quickly and accurately, and writing equations to solve word problems

Ask to see a sample of your child's work. Ask the teacher questions such as: Is this piece of work satisfactory? How could it be better? Is my child on track? How can I help my child improve or excel in this area? If my child needs extra support or wants to learn more about a subject, are there resources to help his or her learning outside the classroom?

### ***Help Your Child Learn At Home***

Learning does not end in the classroom. Children need help and support at home to succeed in their studies. Try to create a quiet place for your child to study, and carve out time every day when your child can concentrate on reading, writing, and math uninterrupted by friends, brothers or sisters, or other distractions.

You should also try and sit down with your child at least once a week for 15 to 30 minutes while he or she works on homework. This will keep you informed about what your child is working on, and it will help you be the first to know if your child needs help with specific topics. By taking these small steps, you will be helping your child become successful both in and outside the classroom.



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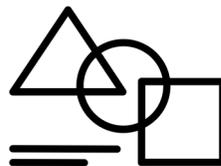
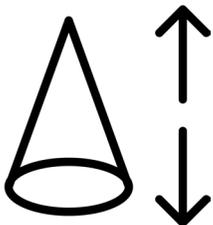
## What Every Child Should Know 7th Grade

### *Educating for citizenship in today's world*

Within a society whose structures are largely mathematical it is important that citizens be educated in the methods of mathematics: first in terms of general numeracy but also in terms of understanding mathematics as a discipline which has formatting power in society. Teaching students to identify and pose problems, to explain themselves in terms others can understand and to question the invisible structures of mathematics is key to developing informed, active and critical citizens. Mathematics has a role in citizenship education because it has the potential to help us understand our society and our role in shaping it.

#### ***Skills employers look for:***

- ★ Ability to work in a team
- ★ Ability to make decisions and solve problems
- ★ Ability to plan, organize and prioritize work
- ★ Ability to relate math with the real world
- ★ Ability to obtain and process information
- ★ Ability to analyze quantitative data
- ★ Technical knowledge related to the job
- ★ Proficiency with computer software programs



## What Every Child Should Know 8th Grade

In 8th grade, your child will learn a number of skills and ideas that he or she must know and understand to be ready for college and career. Your child will continue to learn how to write and reason with algebraic expressions. Your child also will make a thorough study of linear equations with one and two variables. Building on previous work with relationships between quantities, your child will be introduced to the idea of a mathematical function. And your child will prepare for high school geometry by understanding congruence (same shape and size) and similarity of geometric figures.

- Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations
- Grasping the concept of a function and using functions to describe quantitative relationships
- Analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

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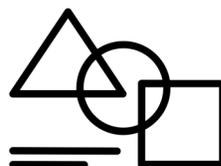
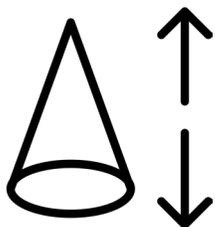
When you talk to the teacher, do not worry about covering everything. Instead, keep the conversation focused on the most important topics. In 8th grade, these include:

- Linear equations with one and two variables
- Functions
- Congruence and similarity of geometric figures

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