



# NCTM Principles & Standards

*Principles & Standards for School Mathematics outlines the essential components of an effective school mathematics program.*

## The NCTM's Principles & Standards for School Mathematics

The **Principles** are the fundamentals to an effective mathematics education. The **Standards** are descriptions of what mathematics instruction should enable students to learn. Together the **Principles and Standards** offer a comprehensive and coherent set of learning goals, serving as a resource to teachers and a framework for curriculum. Our resource offers exercises written to the NCTM Process and Content Standards and is inspired by the **Principles** outlined below.

### Six Principles for School Mathematics

#### Equity

**EQUITY:** All students can learn mathematics when they have access to high-quality instruction, including reasonable and appropriate accommodation and appropriately challenging content.

#### Curriculum

**CURRICULUM:** The curriculum must be coherent, focused, and well articulated across the grades, with ideas linked to and building on one another to deepen students' knowledge and understanding.

#### Teaching

**TEACHING:** Effective teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well.

#### Learning

**LEARNING:** By aligning factual knowledge and procedural proficiency with conceptual knowledge, students can become effective learners, reflecting on their thinking and learning from their mistakes.

#### Assessment

**ASSESSMENT:** The tasks teachers select for assessment convey a message to students about what kinds of knowledge and performance are valued. Feedback promotes goal-setting, responsibility, and independence.

#### Technology

**TECHNOLOGY:** Students can develop a deeper understanding of mathematics with the appropriate use of technology, which can allow them to focus on decision-making, reflection, reasoning, and problem solving.

Our resource correlates to the six Principles and provides teachers with supplementary materials, which can aid them in fulfilling the expectations of each principle. The exercises provided allow for variety and flexibility in teaching and assessment. The topical division of concepts and processes promotes linkage and the building of conceptual knowledge and understanding throughout the student's grade and elementary school career. Each of the drill sheet problems help students with their procedural proficiency skills, and offers space for reflection and opportunity for the appropriate use of technology.