

## Introduction to NCTM Process Standards

### NCTM Principles and Standards for School Mathematics (PSSM)

#### Communication

- COM.1 Organize and consolidate their mathematical thinking through communication
- COM.2 Communicate their mathematical thinking coherently and clearly to peers, teachers, and others
- COM.3 Analyze and evaluate the mathematical thinking and strategies of others
- COM.4 Use the language of mathematics to express mathematical ideas precisely

#### Connections

- CON.1 Recognize and use connections among mathematical ideas
- CON.2 Understand how mathematical ideas interconnect and build on one another to produce a coherent whole
- CON.3 Recognize and apply mathematics in contexts outside of mathematics

#### Problem Solving

- PS.1 Build new mathematical knowledge through problem solving
- PS.2 Solve problems that arise in mathematics and in other contexts
- PS.3 Apply and adapt a variety of appropriate strategies to solve problems
- PS.4 Monitor and reflect on the process of mathematical problem solving

#### Reasoning and Proof

- RP.1 Recognize reasoning and proof as fundamental aspects of mathematics
- RP.2 Make and investigate mathematical conjectures
- RP.3 Develop and evaluate mathematical arguments and proofs
- RP.4 Select and use various types of reasoning and methods of proof

#### Representation

- R.1 Create and use representations to organize, record, and communicate mathematical ideas
- R.2 Select, apply, and translate among mathematical representations to solve problems
- R.3 Use representations to model and interpret physical, social, and mathematical phenomena

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