



Early Algebra Concepts

Outcomes for *Early Algebra Concepts*:

Participants will explore introducing children to algebraic notation and procedures for the purpose enriching student understanding of important mathematical ideas.

Big Ideas about Algebra Concepts

There are some important ideas about algebra concepts that can, and should, be introduced in elementary school.

The concepts are best introduced in problem situations that provide a context for thinking about the concepts.

The goal is not simply to introduce children to algebraic notation and algebraic reasoning. The goal is to enrich the study of number operation by focusing on important mathematical ideas and ways of thinking. Specifically we want students to use their knowledge of equality, relational thinking and understanding of the basic properties of number operations.

Important early algebra concepts include using variables to represent numbers. Most children will have had some experience with open number sentences and using a box as a unknown. When you begin to talk about variables, it is important to move students to more precise notation using letters. The correct notation will help when building the ideas of multiple variables and repeated variables.

It is generally accepted in CGI algebra classrooms to call the following mathematical convention the mathematicians' rule about repeated variables:

When the same variable appears more than one time in a number sentence, the variable must be replaced by the same number throughout the number sentence for each substitution.