

Math Myths and Misconceptions

A Series on Preventing and
Repairing Student Misconceptions
in Mathematics



Preventing Misconceptions

Session 4a

Prerequisites for Learning the Basic Addition Facts

Part One of a two-part Series

Basic Addition Facts

The title is centered at the top of the slide. It is flanked by five circles: a solid light purple circle on the far left, a hollow light purple circle, a solid light purple circle, a hollow light purple circle, and a solid light purple circle on the far right.

One of the foundations in mathematics is the internalization of the 100 single-digit “basic addition facts”.

Basic Addition Facts

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One could memorize all the basic facts by rote, but pattern-based and number sense strategies build a stronger foundation for higher level mathematics.

Basic Addition Facts



A basic addition fact is defined
as the sum of two one-digit
addends

$3 + 4 = 7$ is an addition fact



Basic Addition Facts

A basic addition fact is defined
as the sum of two one-digit
addends

$12 + 3 = 15$ is not a basic
addition fact because 12 is not
a one-digit number

Basic Addition Facts

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Learning the basic addition facts is important, however students should not be asked to commit the facts to memory until they have a conceptual understanding of the operation.

Basic Addition Facts

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Students will need strategies to help them learn the 100 basic addition facts.

Basic Addition Facts

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There are some prerequisite skills that students will need in order to facilitate learning the basic addition facts.

Basic Addition Facts

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Students should be able to do the following before working with written number problems.

Basic Addition Facts-Prerequisite Skills

Count backwards as well as forwards while performing a physical task, such as tying shoes.

The combined physical and mental activity assists with automaticity and fluency in thinking.

Basic Addition Facts-Prerequisite Skills

Give one more or take one less from any given whole number.

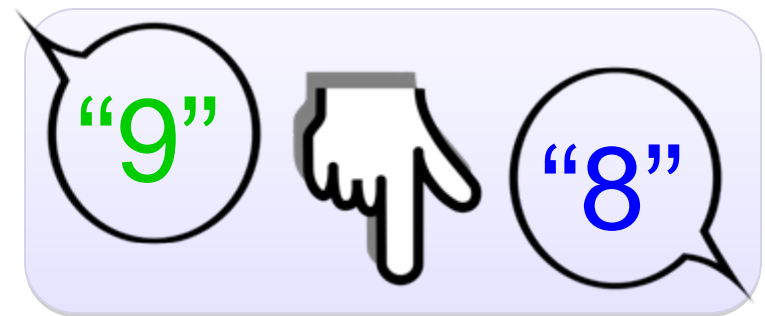
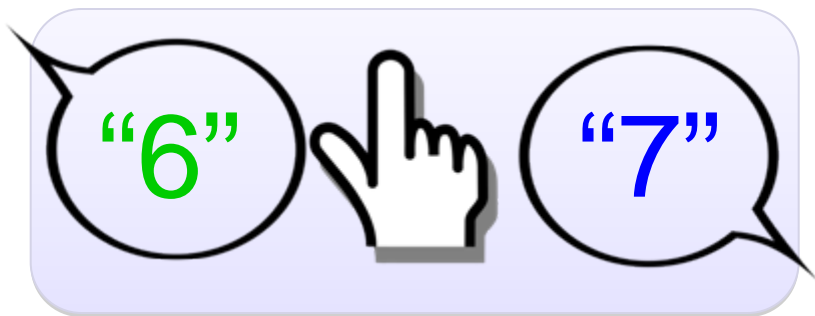
6 and 1 more is 7;

9 and 1 less is 8.

Basic Addition Facts-Prerequisite Skills

Give one more or take one less from any given whole number.

Teaching strategy: Call out a number and hold one finger up to add, or hold one finger down to subtract. Students give the answer.



Basic Addition Facts-Prerequisite Skills

Give two more or take two less from any given whole number.

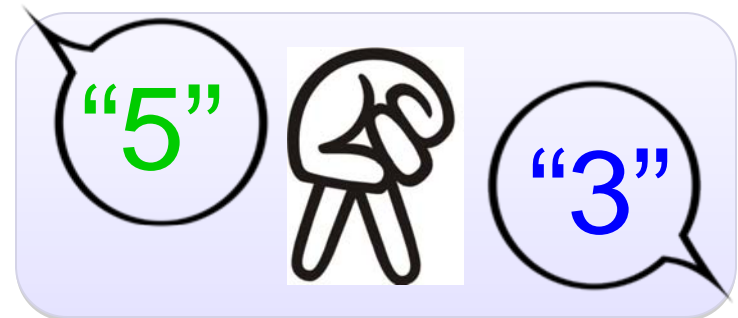
7 and 2 more is 9;

5 and 2 less is 3.

Basic Addition Facts-Prerequisite Skills

Give two more or take two less from any given whole number.

Teaching strategy: Call out a number and hold two fingers up to add, or hold two fingers down to subtract. Students give the answer.



Basic Addition Facts-Prerequisite Skills

Double any whole number from 0 to 9.

Teaching strategy: Use visual associations, such as 5 fingers, 10 on 2 hands; 6 eggs in a row, 12 in 2 rows.

