

MENTAL MATH ACTIVITIES

GRADES 1-4

Ontario Edition

hands-on **mathematics**

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Introduction to Mental Math Grades 1-4

What Is Mental Math?

Mental math is a core focus of mathematics, which helps students develop essential skills involved in working with numbers and assists them with daily mathematical thinking and problem solving.

Mental math:

- is visually and cognitively based. Students do not use manipulatives or paper-and-pencil supports when doing mental math activities or solving mental math problems
- involves mental calculating without the use of external memory aids
- is a combination of cognitive strategies that enhances flexible thinking and number sense
- improves computational fluency by developing efficiency, accuracy, and flexibility

At any grade level, students should do mental math activities daily for approximately five minutes. When they are calculating mentally, speed should not be a factor in determining how successful they are with the task. Students differ in the amount of time they need to process mathematical concepts, and, so, it is recommended that mental math activities not be timed.

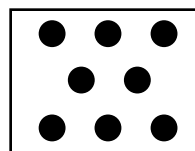
When conducting mental math activities in your classroom, students benefit from discussing various strategies for solving the same problem. Encourage students both to share their own strategies and to listen to the strategies used by others.

The ***Hands-On Mathematics*** program focuses on three types of mental math: *subitizing*, *mental calculations*, and *counting*.

Subitizing

Subitizing means instantly recognizing random number patterns. This is sometimes referred to as *flash math*. You can use an overhead

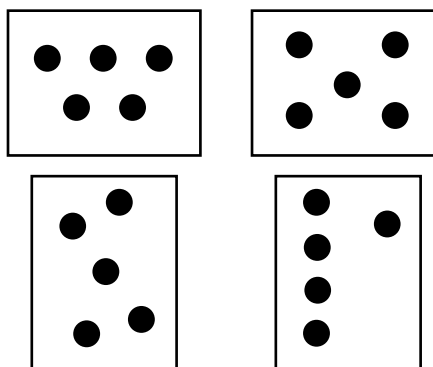
projector to flash number patterns or you can simply flash cards by hand. Display patterns for a few seconds, and then ask students to tell what number they saw and how they saw it. For example:



I saw 8, or
I saw 5 and 3.

You can also use various objects for subitizing, such as bingo chips or interlocking cubes, by placing sets of them onto an overhead projector.

Subitizing patterns can be regular patterns or random configurations. For example, students should instantly recognize “five” in any of the following configurations:



Four types of subitizing templates are included in the ***Hands-On Mathematics*** program:

1. Number-cube cards display the six sides of number cubes (dice) with dots in the traditional number-cube positions.

