

# Clarification of Expectations Regarding Strategies and Maintenance

Clarifications to the **Alberta Mathematics Kindergarten to Grade 9 Program of Studies** and to mathematics curriculum support documents are effective September 2016. The updates clarify expectations regarding strategies and maintenance of previous knowledge.

## Does my child need to use a specific strategy?

No. Students investigate a variety of strategies for number operations, one of which must be the standard/traditional algorithm.

Students are to use a strategy that they understand. A student's strategy may evolve over time as the student continues to develop mathematical understanding.

Here are some samples of different ways that a student could solve an addition problem.

The image shows three distinct strategies for solving the addition problem  $645 + 230 = ?$ , each presented in a colored box with a green arrow pointing to the final result.

- Orange Box (Standard Algorithm):** Shows the traditional column-wise addition.
$$\begin{array}{r} 645 \\ + 230 \\ \hline 875 \end{array}$$

➡  $645 + 230 = 875$
- Yellow Box (Decomposition):** Breaks the numbers into hundreds, tens, and ones, adds them separately, and then combines the results.
$$\begin{array}{l} 600 + 200 = 800 \\ 40 + 30 = 70 \\ 5 + 0 = 5 \\ 800 + 70 + 5 = 875 \end{array}$$

➡  $645 + 230 = 875$
- Green Box (Compensation):** Adjusts one number to a rounder value and then adjusts the other number to compensate.
$$\begin{array}{l} 645 + 200 = 845 \\ 845 + 30 = 875 \end{array}$$

➡  $645 + 230 = 875$

A fact sheet regarding [Strategies for Arithmetic Operations](https://education.alberta.ca/mathematics-k-6/program-supports/everyone/support-documents/) can be found on the Mathematics web page at <https://education.alberta.ca/mathematics-k-6/program-supports/everyone/support-documents/>.

## Do students maintain previous knowledge related to number operations?

Yes. It is important for students to maintain knowledge related to number facts and number operations. Notes have been added to the mathematics program of studies to indicate to teachers areas where this knowledge could be reinforced.



## I need more information. Where can I find it?

Additional information that may be useful can be found on the Mathematics web page at <https://education.alberta.ca/mathematics-k-6/program-supports/everyone/support-documents/>. Listed below are a few resources that may be of particular interest.

- Clarification of Expectations Regarding Number Facts is a fact sheet clarifying expectations regarding the mastery of number facts from grades 1 to 5.
- [Sample Standard/Traditional Algorithms](#) is a fact sheet that provides samples of standard/traditional algorithms for all four operations.
- [My Child's Learning: A Parent Resource](#) helps parents have a better understanding of Alberta's curriculum.