

CLARIFICATION OF EXPECTATIONS REGARDING BASIC NUMBER FACTS AND STRATEGIES



Clarifications to the **Alberta Mathematics Kindergarten to Grade 9 Program of Studies** and to mathematics curriculum support documents will be effective September 2014. The updates clarify expectations regarding the mastering of basic number facts and the use of strategies from grades 1 to 5.

What are the basic number facts that students are expected to know?

Grade 1
<ul style="list-style-type: none">• Students begin to learn strategies for addition and related subtraction facts to 18.• Students recall addition and related subtraction facts to 5 by the end of Grade 1.
Grade 2
<ul style="list-style-type: none">• Students apply strategies for addition and related subtraction facts to 18.• Students recall addition and related subtraction facts to 10 by the end of Grade 2.
Grade 3
<ul style="list-style-type: none">• Students recall and apply addition and related subtraction facts to 18.• Students recall multiplication and related division facts to 5×5 by the end of Grade 3.
Grade 4
<ul style="list-style-type: none">• Students apply strategies for multiplication and related division facts to 9×9.• Students recall multiplication and related division facts to 7×7 by the end of Grade 4.
Grade 5
<ul style="list-style-type: none">• Students recall and apply multiplication facts (multiplication tables) and related division facts to 9×9 by the end of Grade 5.

What is mastery of number facts?

The mathematics program of studies expects students to master their number facts. Mastery of number facts occurs when students understand and recall facts. This allows students to apply their knowledge to different and more complex computations and to be flexible in their thinking.

Example

If a child knows 3×8 is 24, then 3×16 becomes $3 \times 8 \times 2$ which is 48.

This example demonstrates flexibility of thinking in that students can extend their knowledge of a known fact and use it in an unfamiliar situation.

Recall of number facts is when students commit them to memory and retrieve them when needed. Students who simply recall facts without understanding have not achieved mastery. Similarly, students who understand the facts but are unable to recall the facts have not reached mastery.

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What are multiplication tables?

Often the terms “multiplication tables” and “multiplication facts” are used to mean the same thing. Multiplication tables are one way to organize multiplication facts.

Does my child need to use a specific strategy?

Students investigate a variety of strategies and become proficient in at least one appropriate and efficient strategy that they understand. Strategies may include traditional algorithms such as long division and vertical addition; however, specific strategies are not prescribed in the mathematics program of studies. The teaching professional has the flexibility and responsibility to meet the learning needs of each of his or her students. Over time, students refine their strategies to increase their accuracy and efficiency.

How might I support my child at home to master basic number facts?

- Encourage your child to practise number facts in day-to-day situations, such as those involving money, time or measurement.
- Encourage your child to practise his or her mental mathematics skills when playing games that require computation, such as cribbage.
- Look for opportunities to discuss number facts and ways your child determines an answer.