

Number Sense and Computation Status Report

Standard Written Algorithms

We know that:

for various reasons, traditional written methods fail some (many) children.

We have evidence that:

developing standard written algorithms does not develop number sense.

Mental Computation

We know that:

traditional mental computation methods (speed and accuracy emphasis) provide an inefficient method of improving the mental computation especially of less confident/competent students, and inhibits flexible thinking.

We have some evidence, at least short term, that a strategies approach to mental computation:

- has a great effect on students' competence, confidence and enjoyment,
- is a viable alternative classroom approach to teaching mental computation,
- is consonant with a constructivist approach to mathematics teaching,
- improves students' ability to discuss, explain, justify orally.

We think that:

it is beneficial in the long term in improving both computational competence and number sense.

Informal Written Computation

We know that:

At least some children can develop secure informal written methods.

We have some evidence that:

- some teachers with experience see a value in developing informal written methods with all children
- informal written computation methods can be built on the foundation of strategy-based mental computation teaching methods.
- children will not spontaneously develop the standard written algorithms.