

Appendix

The One Minute Basic Number Facts Tests (1995)

The *One Minute Basic Number Facts Tests* are based on the performance of students in South Australian government schools in 1995. All scores in the norm tables have been rounded to the nearest 0.5 or nearest whole number.

In the norm tables the 'normal range' column indicates the range of scores within which roughly 50% of the students in that particular age group would score. This range has been determined by using $\pm .68$ standard deviation.

The 'critically low score' has been calculated from one standard deviation below the mean for the age group. Scores below this critical level place a student in approximately the bottom 16% of students in that age group.

The test-retest reliability of the One Minute Basic Number Facts Tests ranges from .88 to .94 according to age level.

Instruction for administration

- Ensure that the test material has been prepared using a size of type large enough for the children to read easily. If necessary, enlarge the test on a photocopier and, for young children or those with coordination difficulties, considerably increase the space between test items.
- Administer at most only two tests at a time, with a break (e.g. recess) between the addition/subtraction tests and the multiplication/division tests. The multiplication and division tests would not normally be given to children below the age of seven years.
- Place the test sheet face down on the children's tables.
- The children write their name on the back of the sheet.
- You will later need to check the children's age in years and months.

- Say:

'When you turn over the page you will find some addition (etc.) questions.

When I say "start now" I want you to write down the answer to each question as quickly as you can. Don't worry if you don't finish them all.

Work down the page.

Pencils ready. Now turn over the page.

Find the addition (adding) questions.'

As soon as the children are ready, say 'Start now'.

- After exactly one minute say '**Stop!** Pencils down!'
- Repeat the procedure for the subtraction test.
- Say 'Don't forget, this is subtraction. You are taking the number away this time. One minute, starting now!'
- After one minute say '**Stop!** Pencils down!'

One Minute Tests of Basic Number Facts

Addition	Subtraction	Multiplication	Division
$2 + 1 =$	$2 - 1 =$	$1 \times 2 =$	$2 \div 1 =$
$1 + 4 =$	$5 - 1 =$	$2 \times 3 =$	$4 \div 2 =$
$2 + 2 =$	$3 - 2 =$	$2 \times 5 =$	$3 \div 1 =$
$4 + 2 =$	$5 - 3 =$	$1 \times 4 =$	$6 \div 3 =$
$3 + 4 =$	$6 - 2 =$	$3 \times 2 =$	$8 \div 2 =$
$2 + 3 =$	$2 - 2 =$	$4 \times 3 =$	$9 \div 3 =$
$5 + 2 =$	$6 - 4 =$	$9 \times 1 =$	$10 \div 2 =$
$4 + 5 =$	$7 - 2 =$	$6 \times 2 =$	$12 \div 3 =$
$3 + 5 =$	$6 - 1 =$	$3 \times 4 =$	$15 \div 5 =$
$2 + 8 =$	$7 - 3 =$	$5 \times 3 =$	$16 \div 4 =$
$4 + 4 =$	$8 - 2 =$	$7 \times 2 =$	$18 \div 3 =$
$2 + 5 =$	$7 - 5 =$	$3 \times 6 =$	$20 \div 4 =$
$3 + 3 =$	$6 - 6 =$	$2 \times 8 =$	$21 \div 3 =$
$1 + 8 =$	$8 - 3 =$	$4 \times 5 =$	$24 \div 4 =$
$6 + 4 =$	$7 - 4 =$	$9 \times 2 =$	$30 \div 3 =$
$3 + 7 =$	$9 - 3 =$	$3 \times 7 =$	$30 \div 5 =$
$6 + 3 =$	$8 - 5 =$	$6 \times 4 =$	$24 \div 8 =$
$5 + 5 =$	$9 - 5 =$	$3 \times 9 =$	$27 \div 3 =$
$1 + 5 =$	$9 - 9 =$	$8 \times 3 =$	$50 \div 5 =$
$6 + 2 =$	$10 - 4 =$	$7 \times 0 =$	$28 \div 4 =$
$2 + 7 =$	$9 - 4 =$	$8 \times 4 =$	$32 \div 8 =$
$4 + 6 =$	$10 - 3 =$	$5 \times 6 =$	$35 \div 5 =$
$5 + 7 =$	$11 - 2 =$	$4 \times 7 =$	$42 \div 6 =$
$8 + 3 =$	$10 - 6 =$	$8 \times 6 =$	$45 \div 5 =$
$4 + 9 =$	$12 - 3 =$	$7 \times 5 =$	$48 \div 8 =$
$7 + 6 =$	$12 - 6 =$	$9 \times 4 =$	$54 \div 6 =$
$6 + 6 =$	$15 - 5 =$	$8 \times 9 =$	$36 \div 9 =$
$8 + 6 =$	$11 - 5 =$	$7 \times 7 =$	$56 \div 7 =$
$9 + 8 =$	$13 - 3 =$	$6 \times 9 =$	$64 \div 8 =$
$6 + 9 =$	$12 - 9 =$	$8 \times 8 =$	$63 \div 9 =$
$8 + 7 =$	$14 - 6 =$	$6 \times 8 =$	$72 \div 8 =$
$9 + 5 =$	$17 - 8 =$	$9 \times 9 =$	$81 \div 9 =$
$9 + 7 =$	$16 - 9 =$	$9 \times 7 =$	$88 \div 8 =$

Norm tables for the basic number facts tests

Addition

Age (years)	Average score	Normal range	Critically low score
6.0	4.0	2 – 6	0
6.5	5.5	3 – 7	2
7.0	8.0	5 – 11	3
7.5	11.0	7 – 15	5
8.0	12.0	8 – 16	6
8.5	15.5	11 – 19	9
9.0	17.0	13 – 21	10
9.5	18.5	14 – 22	11
10.0	20.5	16 – 24	13
10.5	21.5	16 – 26	14
11.0	23.5	20 – 27	18

Subtraction

Age (years)	Average score	Normal range	Critically low score
6.0	3.0	1 – 5	0
6.5	4.0	2 – 6	1
7.0	6.5	3 – 9	2
7.5	8.0	5 – 11	3
8.0	9.0	6 – 12	4
8.5	12.0	8 – 16	6
9.0	13.0	9 – 17	7
9.5	15.0	11 – 19	8
10.0	16.5	12 – 21	10
10.5	18.0	13 – 23	11
11.0	21.0	17 – 25	14

Multiplication

Age (years)	Average score	Normal range	Critically low score
7.5	4.0	1 – 7	0
8.0	5.5	3 – 8	2
8.5	8.5	5 – 11	3
9.0	9.0	6 – 12	4
9.5	11.5	7 – 15	5
10.0	13.0	9 – 17	7
10.5	15.0	10 – 20	8
11.0	17.0	13 – 21	11

Division

Age (years)	Average score	Normal range	Critically low score
7.5	2.5	0 – 4	0
8.0	3.0	1 – 5	0
8.5	5.0	2 – 8	1
9.0	6.0	3 – 9	1
9.5	7.0	3 – 11	2
10.0	9.0	5 – 13	3
10.5	11.0	6 – 16	3
11.0	13.0	8 – 18	5