

Calculating learners' scores Welsh Reading Tests Years 2–6

National Reading Tests

2017



Llywodraeth Cymru
Welsh Government

Purpose of this document

The purpose of this booklet is to enable schools to convert raw scores from the tests to age-standardised scores and progress measures where these have not been collected via the Welsh National Tests Data Collection (WNTDC). This will be relevant for independent schools. It will also be relevant where a learner has taken a test outside of the test window or an out-of-year test for diagnostic purposes.

Please note: only progress measures can be calculated for learners taking out-of-year tests.

Calculating learners' scores from national tests

The age-standardised scores and the progress measures were established using the data submitted by all Welsh-medium schools in Wales with learners who had taken the 'live' Welsh reading tests in May 2017.

Scores compare learners to other learners taking the Welsh reading test.

Age-standardised scores

The age-standardised score scales make it possible to compare an individual learner's performance on the test in 2017 with the performance of all other learners of the same age, in years and completed months, taking the test.

Age-standardised scores are adjusted for age.

Working out age at date of test

You can use the 'age calculator' tool at learning.gov.wales/resources/browse-all/reporting-and-interpreting-national-test-results-2017/?lang=en to calculate age at date of test using the learner's date of birth and the date on which the test was taken. This will give you the learner's age in years and completed months.

Working out an age-standardised score

To work out the age-standardised score for an individual learner you will need:

- their raw score (total number of marks awarded when the test was marked)
- their age on the date the test was taken in years and **completed** months.

Use Tables 1–3 to look up the corresponding age-standardised score. Using the appropriate table for the test taken, locate the learner's raw score on the left-hand side of the table. Then read across the row to the column headed by the learner's age. The age-standardised score for this learner is in the cell where the row and column intersect. For example, a learner who has taken test CB5 and is 9 years and 3 months (9.03) and has a raw score of 23 would have an age-standardised score of 108.

Interpreting an age-standardised score

When age-standardised score scales are developed, the average raw score for all the learners of a given age taking the test is set to be equivalent to a standardised score of

100. About 68 per cent of learners would be expected to have age-standardised scores between 85 and 115. An age-standardised score lower than 85 **might** suggest some difficulty with reading as measured on the test. An age-standardised score greater than 115 **might** suggest that a learner is performing well in comparison to other learners of the same age and that it may be appropriate to provide them with more challenging reading-related activities.

Very low age-standardised scores are shown in the table as * which can be interpreted as 'less than 70' and very high scores are shown as **, which can be interpreted as 'more than 140'. The tests are designed to measure the range of performance in reading that would be expected from learners in the specified year groups. In the case of learners whose reading skills are developing more slowly than would be expected for their age or learners who achieve very highly on the tests, their scores cannot be determined as accurately as those for learners scoring within the range expected. If a school wishes to calculate class averages, the use of 69 or 141 would be accurate enough estimates for these learners.

Table 1: CA5 raw score to age-standardised score conversion table

Year 2/3 Welsh CA5													
Raw score	Age in years and (completed) months												
	6.08	6.09	6.10	6.11	7.00	7.01	7.02	7.03	7.04	7.05	7.06	7.07	7.08
0	*	*	*	*	*	*	*	*	*	*	*	*	*
1	72	72	71	71	70	*	*	*	*	*	*	*	*
2	77	76	76	75	74	73	73	72	71	71	70	*	*
3	81	81	80	79	78	77	77	76	75	74	73	72	72
4	84	84	84	83	82	81	80	80	79	78	77	76	75
5	87	87	87	86	85	84	83	83	82	81	80	79	78
6	90	90	89	89	88	87	86	85	85	83	82	82	81
7	92	92	92	91	90	89	88	88	87	86	85	84	83
8	94	94	94	93	92	91	90	89	89	88	87	86	85
9	96	96	95	95	94	93	92	91	90	90	89	88	87
10	98	98	97	96	96	95	94	93	92	91	90	90	89
11	99	99	99	98	97	97	96	95	94	93	92	91	91
12	101	101	100	100	99	98	97	96	95	94	93	93	92
13	102	102	102	101	101	100	99	98	97	96	95	94	94
14	104	104	103	103	102	101	100	99	98	97	97	96	95
15	106	105	105	104	103	102	102	101	100	99	98	97	97
16	107	107	106	106	105	104	103	102	101	100	100	99	98
17	108	108	108	107	106	105	104	104	103	102	101	100	100
18	110	110	109	108	107	106	106	105	104	103	102	102	101
19	111	111	111	110	109	108	107	106	105	105	104	103	103
20	112	112	112	111	110	109	108	107	107	106	105	105	104
21	114	114	113	113	112	111	110	109	108	107	107	106	106
22	115	115	115	114	113	112	111	110	110	109	108	108	107
23	117	117	117	116	115	114	113	112	111	110	110	109	109
24	119	119	118	118	117	116	114	114	113	112	111	111	110

Year 2/3 Welsh CA5

Raw score	Age in years and (completed) months											
	7.09	7.10	7.11	8.00	8.01	8.02	8.03	8.04	8.05	8.06	8.07	8.08
0	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*
3	71	71	70	70	*	*	*	*	*	*	*	*
4	75	74	73	73	72	72	71	70	*	*	*	*
5	78	77	76	76	75	75	74	73	72	71	71	71
6	80	80	79	79	78	78	76	75	74	74	73	73
7	82	82	81	81	81	80	79	78	77	76	76	76
8	85	84	83	83	82	82	81	80	79	78	78	78
9	86	86	85	85	84	83	83	82	81	80	80	80
10	88	87	87	86	86	85	84	83	82	82	81	81
11	90	89	88	88	87	87	86	85	84	83	83	83
12	91	91	90	89	89	88	87	86	85	85	84	84
13	93	92	91	91	90	89	89	88	87	86	86	86
14	94	93	92	92	91	91	90	89	88	88	87	87
15	96	95	94	93	93	92	92	91	90	89	89	89
16	97	96	95	95	94	94	93	92	91	91	90	90
17	99	98	97	96	95	95	94	94	93	92	92	91
18	100	99	98	98	97	96	96	95	94	93	93	93
19	102	101	100	99	98	98	97	96	95	95	94	94
20	103	102	101	100	100	99	98	98	97	96	96	95
21	105	104	103	102	101	100	100	99	98	97	97	97
22	106	105	105	104	103	102	101	100	100	99	98	98
23	108	107	106	105	104	104	103	102	101	100	100	100
24	109	109	108	107	106	105	105	104	103	102	101	101

Year 2/3 Welsh CA5

Raw score	Age in years and (completed) months											
	7.09	7.10	7.11	8.00	8.01	8.02	8.03	8.04	8.05	8.06	8.07	8.08
25	111	110	110	109	108	107	107	106	105	104	103	103
26	113	112	111	111	110	109	109	108	107	106	105	105
27	115	115	114	113	112	111	111	110	109	108	107	107
28	117	117	116	115	114	113	113	112	111	110	110	110
29	120	119	119	118	117	116	115	115	114	113	112	112
30	123	122	122	121	120	120	119	118	117	116	116	115
31	127	126	126	125	124	124	123	122	121	120	120	119
32	130	130	129	129	129	128	128	127	126	125	125	125
33	134	133	133	133	133	133	132	132	131	131	131	130
34	137	137	137	137	137	137	137	136	136	136	136	136

Table 2: CB5 raw score to age-standardised score conversion table

Year 4/5 Welsh CB5													
Raw score	Age in years and (completed) months												
	8.08	8.09	8.10	8.11	9.00	9.01	9.02	9.03	9.04	9.05	9.06	9.07	9.08
0	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	70	70	*	*	*	*	*	*	*	*
2	74	74	74	74	74	74	73	73	72	72	71	71	70
3	79	79	79	79	78	78	77	77	76	76	75	74	73
4	83	83	82	82	82	81	81	80	80	79	79	78	77
5	87	86	86	85	84	84	84	83	83	82	81	81	80
6	89	89	88	88	87	86	86	86	85	85	84	83	82
7	91	91	91	90	89	88	88	88	87	87	86	85	84
8	92	92	92	92	91	90	90	90	89	88	88	87	86
9	94	94	94	93	92	92	91	91	90	90	89	88	88
10	95	95	95	95	94	93	93	92	92	91	91	90	89
11	97	97	97	96	95	95	94	94	93	93	92	91	90
12	98	98	98	98	97	96	96	95	94	94	93	93	92
13	100	99	99	99	98	97	97	96	96	95	94	94	93
14	101	101	100	100	99	99	98	98	97	96	96	95	94
15	102	102	102	101	100	100	99	99	98	97	97	96	95
16	103	103	103	102	102	101	100	100	99	98	98	97	96
17	105	104	104	103	103	102	102	101	100	99	99	98	98
18	106	106	105	105	104	103	103	102	101	101	100	100	99
19	107	107	107	106	105	104	104	103	102	102	101	101	100
20	108	108	108	107	106	106	105	104	104	103	102	102	101
21	110	109	109	108	107	107	106	106	105	104	104	103	102
22	111	111	110	109	109	108	107	107	106	105	105	104	103
23	112	112	111	111	110	109	109	108	107	107	106	105	105
24	114	114	113	112	111	111	110	109	109	108	107	107	106

Year 4/5 Welsh CB5

Raw score	Age in years and (completed) months											
	9.09	9.10	9.11	10.00	10.01	10.02	10.03	10.04	10.05	10.06	10.07	10.08
0	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	70	70	*	*	*	*	*	*	*
3	73	72	72	73	72	72	72	71	71	71	71	70
4	76	76	76	75	75	75	74	73	73	73	73	72
5	79	79	79	78	78	78	77	76	75	75	75	74
6	81	81	81	81	80	80	79	78	78	77	77	76
7	83	83	83	82	82	82	81	80	80	79	79	78
8	85	85	84	84	84	84	83	82	81	81	80	80
9	87	86	86	86	85	85	85	84	83	82	82	81
10	88	88	87	87	87	86	86	85	84	84	83	83
11	90	89	89	88	88	88	87	86	86	85	84	84
12	91	90	90	89	89	89	88	87	87	86	86	85
13	92	92	91	91	90	90	89	88	88	87	87	86
14	94	93	93	92	92	91	90	89	89	88	88	88
15	95	94	94	93	93	92	91	91	90	89	89	89
16	96	95	95	95	94	93	93	92	91	91	90	90
17	97	96	96	96	95	95	94	93	92	92	91	91
18	98	98	97	97	96	96	95	94	94	93	93	92
19	99	99	98	98	97	97	96	96	95	94	94	93
20	100	100	99	99	99	98	97	97	96	95	95	95
21	102	101	101	100	100	99	98	98	97	97	96	96
22	103	102	102	102	101	100	99	99	98	98	97	97
23	104	103	103	103	102	102	101	100	99	99	99	98
24	105	105	104	104	103	103	102	101	100	100	100	100

Year 4/5 Welsh CB5

Raw score	Age in years and (completed) months											
	9.09	9.10	9.11	10.00	10.01	10.02	10.03	10.04	10.05	10.06	10.07	10.08
25	107	106	106	105	105	104	103	102	102	101	101	101
26	108	108	107	107	106	105	105	104	103	103	102	102
27	110	109	109	108	108	107	106	105	105	104	104	104
28	111	111	110	110	109	109	108	107	106	106	106	106
29	113	112	112	112	111	111	110	109	108	108	108	108
30	115	115	114	114	113	113	112	111	111	110	110	110
31	117	117	117	117	116	115	115	114	113	112	112	112
32	120	120	120	120	120	119	118	117	116	116	115	115
33	126	126	126	126	125	124	123	122	121	120	120	119
34	132	132	132	132	131	130	130	129	128	127	127	126
35	138	138	138	138	137	137	136	136	135	135	135	135

Table 3: CC5 raw score to age-standardised score conversion table

Year 6 Welsh CC5													
Raw score	Age in years and (completed) months												
	10.08	10.09	10.10	10.11	11.00	11.01	11.02	11.03	11.04	11.05	11.06	11.07	11.08
0	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	70	*	*	*	*	*	*	*	*
3	73	73	73	73	73	72	72	71	71	70	71	71	72
4	78	77	77	76	76	76	75	74	73	73	73	74	75
5	81	80	80	80	79	79	78	77	76	75	75	76	77
6	83	83	82	82	81	81	80	79	78	78	78	79	80
7	85	85	84	84	83	82	82	81	80	80	80	81	82
8	87	87	86	85	85	84	83	82	82	82	82	83	84
9	89	88	88	87	86	86	85	84	83	83	84	85	86
10	90	90	89	89	88	87	86	85	85	85	85	86	87
11	92	91	91	90	90	89	88	87	86	86	87	88	89
12	93	93	92	92	91	90	89	88	88	88	88	89	90
13	95	94	94	93	92	92	91	90	89	89	90	91	92
14	96	96	95	94	94	93	92	91	91	91	91	92	93
15	98	97	97	96	95	94	93	92	92	92	92	94	95
16	99	99	98	97	97	96	95	94	93	93	94	95	96
17	101	100	100	99	98	97	96	95	95	95	95	96	97
18	102	102	101	100	99	98	97	97	96	96	97	98	99
19	103	103	102	101	101	100	99	98	98	98	98	99	100
20	104	104	104	103	102	101	100	100	99	99	100	100	101
21	106	106	105	104	104	103	102	101	101	101	101	102	103
22	107	107	107	106	105	104	103	103	102	102	102	103	104
23	109	108	108	107	107	106	105	104	104	103	104	105	106
24	110	110	110	109	108	107	107	106	105	105	105	106	107

Year 6 Welsh CC5

Raw score	Age in years and (completed) months											
	11.09	11.10	11.11	12.00	12.01	12.02	12.03	12.04	12.05	12.06	12.07	12.08
0	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*
2	70	*	*	*	*	*	*	*	*	*	*	*
3	72	72	72	72	72	71	71	71	70	70	70	70
4	75	75	75	75	75	75	74	73	73	73	72	72
5	78	78	78	78	78	78	77	76	75	75	75	75
6	81	81	81	81	81	80	80	79	78	77	77	77
7	83	83	83	83	83	82	81	81	80	80	80	80
8	85	85	85	85	85	84	83	83	82	82	81	81
9	87	87	87	86	86	86	85	85	84	83	83	83
10	88	89	88	88	88	87	87	86	86	85	84	84
11	90	90	90	90	89	89	88	88	87	87	86	86
12	91	92	91	91	91	90	89	89	89	88	88	87
13	93	93	93	92	92	91	91	90	90	90	89	89
14	94	94	94	93	93	92	92	91	91	91	91	90
15	96	96	95	95	94	94	93	93	92	92	92	92
16	97	97	97	96	95	95	94	94	93	93	93	93
17	98	98	98	97	97	96	95	95	95	94	94	94
18	100	100	99	99	98	97	97	96	96	96	96	95
19	101	101	101	100	100	99	98	97	97	97	97	97
20	102	102	102	102	101	100	99	99	98	98	98	99
21	104	104	103	103	103	102	101	100	100	100	100	100
22	105	105	105	104	104	103	103	102	101	101	101	102
23	107	107	106	106	105	105	104	103	103	103	103	103
24	108	109	108	108	107	106	106	105	105	104	104	105

Year 6 Welsh CC5

Raw score	Age in years and (completed) months												
	10.08	10.09	10.10	10.11	11.00	11.01	11.02	11.03	11.04	11.05	11.06	11.07	11.08
25	112	112	111	111	110	109	108	108	107	107	107	108	109
26	114	114	113	113	112	111	110	109	109	109	109	110	111
27	115	115	115	114	114	113	112	111	111	111	111	112	113
28	117	117	117	116	116	115	114	113	113	113	113	114	115
29	119	119	119	119	118	118	117	116	115	115	115	116	118
30	122	122	122	121	121	120	119	118	118	117	118	119	120
31	125	125	125	125	124	123	123	121	120	120	120	122	124
32	129	129	128	128	128	127	126	125	124	124	124	126	128
33	132	132	132	131	131	131	130	129	129	128	129	130	132
34	135	135	135	135	134	134	134	133	133	133	133	134	136
35	139	139	138	138	138	138	138	137	137	137	137	138	140

Year 6 Welsh CC5

Raw score	Age in years and (completed) months											
	11.09	11.10	11.11	12.00	12.01	12.02	12.03	12.04	12.05	12.06	12.07	12.08
25	110	110	110	109	109	108	108	107	106	106	106	106
26	112	112	112	111	111	110	110	109	108	108	108	108
27	114	114	114	113	113	112	112	111	111	110	111	111
28	116	117	116	115	115	114	114	114	113	113	113	113
29	119	119	119	118	117	117	116	116	115	115	115	115
30	121	122	121	120	120	119	119	119	118	118	118	118
31	125	126	125	124	123	123	122	122	122	121	121	121
32	129	129	129	128	127	127	126	126	126	125	125	125
33	133	133	132	132	131	131	130	130	130	130	129	129
34	137	137	136	135	135	135	134	134	134	134	134	134
35	**	**	140	139	139	139	138	138	138	138	138	138

Progress measures

The progress measure scales are calculated separately for each national curriculum year group and each test.

Progress measures are not adjusted for age.

Working out a progress measure

To work out the progress measure for an individual learner you will need their raw score (total number of marks awarded when the test was marked) and their year group.

Use Tables 4–6 to look up the corresponding progress measure. Please ensure you refer to the correct year group when looking up learners' progress measures.

Using the appropriate table for the test taken, locate the learner's raw score on the left-hand side of the table. Then read across the row to the column headed by the learner's year group. The progress measure for this learner is in the cell where the row and column intersect.

For example, a learner in national curriculum Year 2 who has taken test CA5 and has a raw score of 20 would have a progress measure of 1011.

A learner in national curriculum Year 3 who has taken test CA5 and has a raw score of 20 would have a progress measure of 999.

Interpreting a progress measure

The progress measure shows how well an individual learner has done in a given test compared with **all other learners in the same national curriculum year group taking the same test**. The progress measure should be presented as a time series allowing for a learner's achievement in the tests to be tracked over time.

The mean of the progress measure for each year group is set at 1000, and the scores range from 950 to 1050. Learners achieving between 980 and 1020 (i.e. scores within one standard deviation of the mean) have a progress measure that is in line with learners in the same year group (taking the same test). Approximately 68 per cent of learners will have a score in this range. Learners scoring outside of this range (i.e. below 980 or above 1020) have a progress measure that is either below or above that of most learners in their year group.

The progress measure for 2017 should be considered alongside any previous progress measure for this learner. Progress measures that are broadly similar from year to year would suggest that a learner is making steady progress within their year group. Small variations in the score from year to year are to be expected but if there are large changes in the progress measure between one year and the next, then this suggests that a learner has made either more or less progress than the rest of the learners taking the test. Please refer to the practitioner guidance at learning.gov.wales/resources/browse-all/reporting-and-interpreting-national-test-results-2017/?lang=en for further information on interpreting progress measures.

Out-of-year testing

Where a learner has taken a test that is different from their national curriculum year group test, look up their progress measure using the table appropriate for the test taken. Their progress measure compares the learner to all other learners who have taken the same test. For example, for a learner in national curriculum Year 4 who has taken test CA5 and has a raw score of 26 it is possible to look up a Year 2 progress measure and a Year 3 progress measure. A raw score of 26 gives a Year 2 progress measure of 1024 which indicates that the learner has performed better than the average learner in Year 2. A raw score of 26 gives a Year 3 progress measure of 1012 which indicates that the learner has performed at around the same level as the average learner in Year 3.

When comparing progress measures over time it is important to consider the reference group (the national curriculum year group the learner is compared with), as this may be different from one year to the next.

Table 4: Year 2 and Year 3 Test CA5 raw score to progress measure conversion table

Total score	Progress measure Year 2	Progress measure Year 3
0	950	950
1	959	950
2	966	953
3	971	959
4	975	964
5	978	967
6	982	971
7	985	973
8	987	976
9	990	978
10	992	980
11	994	982
12	996	984
13	998	986
14	1000	988
15	1002	990
16	1004	992
17	1006	994
18	1008	996
19	1009	997
20	1011	999
21	1013	1001
22	1015	1003
23	1017	1005
24	1019	1007
25	1021	1010
26	1024	1012
27	1026	1015
28	1029	1018
29	1031	1021
30	1035	1025
31	1039	1029
32	1044	1034
33	1050	1043
34	1050	1050

Table 5: Year 4 and Year 5 Test CB5 raw score to progress measure conversion table

Total score	Progress measure Year 4	Progress measure Year 5
0	950	950
1	958	951
2	966	959
3	971	964
4	975	968
5	979	970
6	982	973
7	985	975
8	987	978
9	989	980
10	991	982
11	993	983
12	995	985
13	996	986
14	998	988
15	999	989
16	1001	991
17	1002	992
18	1004	994
19	1005	996
20	1007	997
21	1008	999
22	1010	1000
23	1012	1002
24	1013	1003
25	1015	1005
26	1017	1007
27	1019	1009
28	1021	1011
29	1024	1014
30	1027	1016
31	1030	1020
32	1033	1024
33	1038	1029
34	1046	1038
35	1050	1050

Table 6: Year 6 Test CC5 raw score to progress measure conversion table

Total score	Progress measure Year 6
0	950
1	950
2	958
3	964
4	968
5	971
6	974
7	976
8	978
9	981
10	983
11	985
12	986
13	988
14	990
15	992
16	994
17	996
18	997
19	999
20	1001
21	1003
22	1005
23	1007
24	1009
25	1011
26	1014
27	1016
28	1019
29	1022
30	1025
31	1029
32	1033
33	1039
34	1048
35	1050

