

Calculating learners' scores Welsh Reading Tests Years 7–9

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 April/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 and 2 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 CC5 and is 11 years and 3 months (11.03) and has a raw score of 23 would have an age-standardised score of 104.

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: CC5 raw score to age-standardised score conversion table

Year 7 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 7 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 7 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 7 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

Table 2: CD5 raw score to age-standardised score conversion table

Year 8/9 Welsh CD5													
Raw score	Age in years and (completed) months												
	12.08	12.09	12.10	12.11	13.00	13.01	13.02	13.03	13.04	13.05	13.06	13.07	13.08
0	*	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	70	70	70	70	70	*	*	*	*	*	*	*
4	73	73	73	73	72	72	72	72	71	71	71	71	70
5	76	76	76	76	75	75	75	74	74	74	73	73	73
6	80	79	79	78	78	77	77	77	77	76	75	75	75
7	82	81	81	81	80	80	80	80	79	78	78	77	77
8	84	83	83	83	82	81	81	81	81	80	80	80	80
9	85	85	85	85	84	83	83	83	83	82	82	81	81
10	87	87	87	86	85	85	85	85	84	84	83	83	83
11	89	89	89	88	87	86	86	86	86	85	85	85	85
12	91	91	90	90	89	88	88	88	87	87	86	86	86
13	92	92	92	91	90	90	89	89	89	88	88	88	87
14	93	93	93	93	92	91	91	91	90	90	89	89	89
15	95	95	95	94	93	93	92	92	92	91	91	90	90
16	96	96	96	96	95	94	94	93	93	93	92	92	91
17	98	98	98	97	96	95	95	95	94	94	94	93	93
18	99	99	99	98	97	97	96	96	96	95	95	95	95
19	100	100	100	100	99	98	98	98	97	97	96	96	96
20	102	102	102	101	100	99	99	99	99	98	98	98	97
21	103	103	103	103	102	101	100	100	100	100	99	99	99
22	105	105	105	104	103	102	102	102	101	101	101	100	100
23	106	106	106	106	105	104	103	103	103	102	102	102	102
24	107	107	107	107	106	106	105	105	104	104	103	103	103

Year 8/9 Welsh CD5

Raw score	Age in years and (completed) months											
	13.09	13.10	13.11	14.00	14.01	14.02	14.03	14.04	14.05	14.06	14.07	14.08
0	*	*	*	*	*	*	*	*	*	*	*	*
1	*	*	*	*	*	*	*	*	*	*	*	*
2	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4	70	70	71	71	71	71	71	70	70	*	*	*
5	73	73	73	73	73	73	73	72	71	71	70	70
6	75	75	75	75	75	75	75	74	73	73	72	72
7	78	78	78	77	77	77	77	76	75	74	74	73
8	80	80	80	79	79	79	79	78	77	76	75	75
9	81	82	81	81	81	81	80	80	79	78	77	77
10	83	83	83	83	82	82	82	81	80	79	79	78
11	85	85	84	84	84	84	83	83	82	81	80	80
12	86	86	86	86	85	85	85	84	83	82	81	81
13	87	87	87	87	87	86	86	86	84	83	83	83
14	89	89	88	88	88	88	88	87	86	85	84	84
15	90	90	90	89	89	89	89	89	88	86	86	86
16	91	91	91	91	90	90	90	90	89	88	87	87
17	93	93	93	92	92	92	92	91	91	90	89	89
18	95	95	94	94	93	93	93	93	92	91	90	90
19	96	96	95	95	95	94	95	94	94	93	92	92
20	97	97	97	96	96	96	96	96	95	94	94	93
21	99	98	98	98	97	97	97	97	96	96	95	95
22	100	100	100	99	98	98	98	98	98	97	97	96
23	101	101	101	100	100	100	100	99	99	98	98	98
24	103	103	102	102	101	101	101	101	100	100	99	99

Year 8/9 Welsh CD5

Raw score	Age in years and (completed) months												
	12.08	12.09	12.10	12.11	13.00	13.01	13.02	13.03	13.04	13.05	13.06	13.07	13.08
25	109	109	109	108	108	107	107	106	106	105	105	105	104
26	110	110	110	110	109	109	108	108	107	107	107	106	106
27	112	112	112	112	111	110	110	110	109	109	108	108	108
28	113	113	113	113	113	112	112	111	111	111	110	110	110
29	115	115	115	115	115	115	114	113	113	112	112	112	112
30	117	117	118	118	118	117	117	116	115	115	115	114	114
31	119	120	120	120	120	120	119	119	118	118	118	117	117
32	123	123	124	124	124	124	123	122	122	121	121	121	120
33	127	128	128	128	128	128	128	127	126	126	126	126	126
34	132	132	132	132	132	132	132	132	131	131	132	132	132
35	137	137	136	136	136	136	136	136	136	136	137	138	138

Year 8/9 Welsh CD5

Raw score	Age in years and (completed) months											
	13.09	13.10	13.11	14.00	14.01	14.02	14.03	14.04	14.05	14.06	14.07	14.08
25	104	104	104	103	103	103	102	102	102	101	101	101
26	106	106	105	105	104	104	104	104	103	103	103	102
27	108	107	107	107	106	106	106	105	105	105	104	104
28	109	109	109	109	108	107	107	107	107	106	106	106
29	112	111	111	111	110	109	109	109	109	109	108	108
30	114	114	113	113	112	112	112	111	111	111	111	111
31	117	117	116	115	115	114	114	114	114	114	113	114
32	120	120	119	119	118	117	117	117	117	117	117	117
33	126	125	124	123	122	122	122	122	122	121	121	121
34	132	131	130	129	129	130	130	130	129	129	128	128
35	138	137	136	136	136	137	138	138	137	136	135	135

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 3 and 4 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 8 who has taken test CD5 and has a raw score of 20 would have a progress measure of 1000.

A learner in national curriculum Year 9 who has taken test CD5 and has a raw score of 20 would have a progress measure of 994.

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 8 who has taken test CC5 and has a raw score of 23 it is possible to look up a Year 7 progress measure. A raw score of 23 gives a Year 7 progress measure of 1007 which indicates that the learner has performed at around the same level as the average learner in Year 7.

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 3: Year 7 Test CC5 raw score to progress measure conversion table

Total score	Progress measure Year 7
0	950
1	950
2	958
3	963
4	967
5	971
6	974
7	976
8	979
9	981
10	983
11	985
12	987
13	989
14	990
15	992
16	994
17	995
18	997
19	999
20	1001
21	1003
22	1005
23	1007
24	1009
25	1011
26	1014
27	1017
28	1019
29	1023
30	1026
31	1030
32	1034
33	1040
34	1050
35	1050

Table 4: Year 8 and Year 9 Test CD5 raw score to progress measure conversion table

Total score	Progress measure Year 8	Progress measure Year 9
0	950	950
1	950	950
2	955	951
3	960	957
4	964	961
5	968	964
6	971	967
7	973	970
8	976	972
9	978	974
10	980	976
11	982	978
12	984	980
13	986	981
14	988	983
15	990	985
16	992	987
17	994	989
18	996	991
19	998	992
20	1000	994
21	1001	996
22	1003	998
23	1005	1000
24	1007	1002
25	1009	1004
26	1011	1006
27	1013	1008
28	1016	1010
29	1018	1013
30	1022	1016
31	1025	1020
32	1029	1024
33	1034	1029
34	1043	1037
35	1050	1050

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