

**Calculating learners' scores
English Reading Tests
Years 2–6**

National Reading Tests

2016



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 schools in Wales with learners who had taken the 'live' English reading tests in May 2016.

Age-standardised scores

The age-standardised score scales make it possible to compare an individual learner's performance on the test in 2016 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 <http://learning.gov.wales/resources/browse-all/reporting-and-interpreting-national-test-results-2016/?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 EB4 and is 9 years and 3 months (9.03) and has a raw score of 23 would have an age-standardised score of 106.

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: EA4 raw score to age-standardised score conversion table

Year 2/3 English EA4													
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	70	70	70	70	70	*	*	*	*	*	*	*	*
2	75	75	75	74	74	74	73	73	71	70	70	*	*
3	80	80	80	79	79	78	78	77	76	75	74	73	73
4	84	84	84	83	82	82	82	81	80	79	78	77	76
5	88	88	87	86	86	85	85	84	83	82	81	80	80
6	91	91	90	89	88	88	88	87	86	85	84	83	82
7	93	93	92	92	91	90	90	89	88	87	86	85	85
8	95	95	94	93	93	92	92	91	90	89	88	87	86
9	97	97	96	95	94	94	93	92	91	90	89	89	88
10	98	98	98	96	96	95	95	94	93	92	91	90	89
11	100	99	99	98	97	96	96	95	94	93	92	91	90
12	101	100	100	99	98	97	97	96	95	94	93	92	91
13	102	102	101	100	99	98	98	97	96	95	94	93	92
14	103	103	102	101	100	99	99	98	97	96	95	94	93
15	104	104	103	102	101	100	100	99	98	97	96	95	94
16	106	105	104	103	102	101	101	100	99	98	97	96	95
17	107	106	105	104	103	103	102	101	100	99	98	97	96
18	108	107	106	105	104	104	103	102	101	100	99	98	97
19	109	108	107	106	105	105	104	103	102	101	100	99	98
20	110	109	109	107	106	106	105	104	103	102	101	100	99
21	111	110	110	108	107	107	106	105	104	103	102	101	100
22	112	111	111	110	108	108	107	106	105	104	103	103	101
23	113	113	112	111	110	109	108	107	106	106	105	104	103
24	114	114	113	112	111	110	110	109	108	107	106	105	104

Year 2/3 English EA4

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	72	72	72	71	71	71	70	70	*	*	*	*
4	76	75	75	74	74	74	73	73	72	71	71	71
5	79	79	78	78	77	77	76	75	75	74	73	73
6	82	81	81	80	80	80	79	78	77	76	76	76
7	84	83	83	82	82	81	81	80	80	79	78	78
8	86	85	85	84	83	83	82	82	81	80	80	80
9	87	86	86	85	85	84	84	83	82	82	81	81
10	88	88	87	87	86	85	85	84	84	83	83	82
11	89	89	88	88	87	87	86	85	85	84	84	84
12	90	90	89	89	88	88	87	86	86	85	85	85
13	91	91	90	90	89	89	88	87	87	86	86	86
14	92	92	91	91	90	90	89	88	88	87	87	87
15	93	93	92	92	91	90	90	89	89	88	88	88
16	94	94	93	93	92	91	91	90	90	89	89	89
17	95	95	94	93	93	92	92	91	90	90	90	90
18	96	96	95	94	94	93	93	92	91	91	91	90
19	97	96	96	95	95	94	94	93	92	92	91	91
20	98	98	97	96	96	95	94	94	93	93	92	92
21	99	99	98	97	97	96	96	95	94	94	93	93
22	100	100	99	98	98	97	97	96	95	95	94	94
23	102	101	100	100	99	98	98	97	96	96	96	95
24	103	102	101	101	100	100	99	98	98	97	97	97

Year 2/3 English EA4

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
25	116	115	115	113	112	111	111	110	109	108	107	106	105
26	118	117	116	115	114	113	112	111	111	110	109	108	107
27	119	119	118	117	115	115	114	113	112	111	111	110	109
28	121	121	120	119	117	117	116	115	114	113	112	112	111
29	124	124	123	121	120	119	118	117	116	115	115	114	113
30	127	126	126	124	123	122	121	120	119	118	118	117	116
31	130	129	129	127	126	126	125	124	123	122	121	120	119
32	132	132	132	131	130	129	129	128	127	127	126	125	124
33	135	135	135	134	134	133	133	132	132	132	131	131	130
34	138	138	138	138	137	137	137	137	136	136	136	136	136

Year 2/3 English EA4

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	104	103	103	102	102	101	100	100	99	98	98	98
26	106	105	104	104	103	102	102	101	100	100	100	100
27	108	107	106	105	105	104	104	103	102	101	101	101
28	110	109	108	107	107	106	106	105	104	103	103	103
29	112	111	111	110	109	109	108	107	107	106	105	105
30	115	114	113	113	112	112	111	110	109	109	108	108
31	118	118	117	117	116	115	115	114	113	112	112	112
32	124	123	122	122	121	120	120	119	118	118	117	117
33	130	130	130	129	129	128	127	127	126	125	125	125
34	136	137	137	137	136	136	135	135	135	135	135	135

Table 2: EB4 raw score to age-standardised score conversion table

Year 4/5 English EB4													
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	*	*	*	*	*	*	*	*	*	*	*	*	*
2	70	70	70	70	*	*	*	*	*	*	*	*	*
3	74	74	74	74	73	73	72	72	71	71	71	70	70
4	79	78	78	77	77	76	76	75	75	74	74	73	72
5	81	81	81	81	80	80	79	78	78	77	76	76	75
6	84	84	84	83	82	82	81	81	80	80	79	78	77
7	86	86	86	85	85	84	83	83	82	82	81	80	80
8	88	88	88	87	86	86	85	85	84	84	83	82	81
9	90	90	89	89	88	87	87	86	86	85	85	84	83
10	92	92	91	90	90	89	88	88	87	87	86	85	84
11	93	93	93	92	91	91	90	89	89	88	87	87	86
12	95	95	94	93	93	92	92	91	90	90	89	88	87
13	96	96	96	95	94	94	93	92	92	91	90	89	88
14	98	98	97	96	96	95	94	94	93	93	92	91	90
15	99	99	98	98	97	96	96	95	94	94	93	92	91
16	101	100	100	99	98	98	97	96	96	95	94	93	92
17	102	102	101	100	100	99	98	98	97	96	96	95	94
18	103	103	103	102	101	100	100	99	98	98	97	96	95
19	105	105	104	103	102	101	101	100	100	99	98	97	96
20	106	106	105	104	104	103	102	101	101	100	99	98	97
21	108	107	107	106	105	104	104	103	102	102	101	100	99
22	109	109	108	107	106	106	105	104	104	103	102	101	100
23	111	110	110	109	108	107	106	106	105	104	104	103	102
24	112	112	111	110	109	108	108	107	106	106	105	104	103

Year 4/5 English EB4

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	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4	72	72	71	71	71	70	70	70	70	*	*	*
5	74	74	74	73	73	72	72	72	71	71	71	71
6	77	76	76	75	75	74	74	74	73	73	73	73
7	79	78	78	78	77	76	76	76	75	75	75	74
8	81	80	80	80	79	79	78	77	77	77	76	76
9	82	82	81	81	81	80	80	79	79	78	78	78
10	84	83	83	82	82	82	81	81	80	80	80	79
11	85	85	84	84	83	83	82	82	82	81	81	81
12	86	86	86	85	85	84	84	83	83	82	82	82
13	88	87	87	87	86	86	85	85	84	84	83	83
14	89	88	88	88	87	87	86	86	85	85	84	84
15	90	90	89	89	89	88	87	87	86	86	86	85
16	91	91	91	90	90	89	89	88	88	87	87	87
17	93	92	92	91	91	90	90	89	89	88	88	88
18	94	93	93	93	92	92	91	90	90	90	89	89
19	95	95	94	94	93	93	92	92	91	91	91	90
20	96	96	96	95	95	94	94	93	92	92	92	92
21	98	97	97	97	96	95	95	94	94	93	93	93
22	99	99	98	98	97	97	96	96	95	95	95	94
23	101	100	100	99	99	98	98	97	97	96	96	96
24	102	102	101	101	100	100	99	98	98	98	97	97

Year 4/5 English EB4

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
25	114	113	113	112	111	110	109	109	108	107	107	106	105
26	115	115	115	113	112	112	111	110	110	109	108	107	106
27	117	117	116	115	114	114	113	112	111	111	110	109	108
28	119	119	118	117	116	116	115	114	113	113	112	111	110
29	121	121	120	120	119	118	117	116	115	115	114	113	112
30	124	124	123	122	121	120	119	118	118	117	116	115	114
31	127	127	126	125	124	123	122	121	120	119	119	118	117
32	130	130	129	128	127	126	125	124	123	122	122	121	120
33	133	132	132	130	129	129	128	127	127	126	125	124	123
34	136	135	134	133	132	132	131	131	130	130	129	128	127
35	139	138	137	136	135	135	134	134	134	133	133	132	132
36	**	**	140	139	138	138	138	137	137	137	137	136	136
37	**	**	**	**	**	**	**	**	**	**	**	140	140

Year 4/5 English EB4

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	104	103	103	102	102	101	100	100	100	99	99	99
26	105	105	104	104	103	103	102	101	101	101	101	100
27	107	106	106	106	105	104	104	103	103	103	102	102
28	109	108	108	107	107	106	106	105	105	104	104	104
29	111	110	110	109	109	108	108	107	107	107	106	106
30	113	113	112	112	111	111	110	110	109	109	108	108
31	116	115	115	114	114	113	113	112	112	111	111	111
32	119	118	118	117	117	116	115	115	114	114	114	113
33	122	121	121	121	120	120	119	118	118	117	117	117
34	127	126	126	125	125	124	124	123	122	121	121	120
35	131	131	130	130	130	129	129	128	128	127	127	126
36	135	135	135	134	134	134	134	134	133	133	132	132
37	140	140	139	139	139	139	139	139	139	138	138	138

Table 3: EC4 raw score to age-standardised score conversion table

Year 6 English EC4													
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	*	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*	*
5	71	70	70	70	70	70	70	70	*	*	*	70	71
6	74	74	73	73	73	73	73	72	72	72	72	73	74
7	77	77	77	76	76	76	76	75	74	74	74	75	77
8	80	80	80	80	79	79	78	78	77	77	77	78	80
9	82	82	82	82	81	81	81	80	80	79	79	80	81
10	84	84	84	84	83	83	83	82	81	81	81	82	83
11	86	86	86	86	85	85	84	84	83	83	83	84	85
12	88	88	87	87	87	87	86	85	85	84	85	85	87
13	89	89	89	89	89	88	88	87	86	86	86	87	88
14	91	91	91	90	90	90	89	88	88	88	88	88	90
15	93	92	92	92	91	91	90	90	89	89	89	90	91
16	94	94	94	93	93	92	92	91	91	90	90	91	93
17	96	96	95	95	94	94	93	93	92	92	92	93	94
18	97	97	97	96	96	95	95	94	94	93	93	94	95
19	99	98	98	98	97	97	96	96	95	95	95	95	96
20	100	100	99	99	99	98	98	97	96	96	96	97	98
21	102	101	101	100	100	100	99	98	98	97	97	98	99
22	103	103	102	102	101	101	101	100	99	99	99	99	100
23	105	104	104	103	103	102	102	101	101	100	100	101	102
24	106	106	105	105	104	104	103	103	102	102	102	102	103

Year 6 English EC4

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	*	*	*	*	*	*	*	*	*	*	*	*
3	*	*	*	*	*	*	*	*	*	*	*	*
4	*	*	*	*	*	*	*	*	*	*	*	*
5	72	72	72	72	72	72	71	71	70	70	70	*
6	75	75	75	75	75	74	74	73	73	73	72	72
7	78	78	78	78	77	77	77	76	75	75	75	75
8	80	81	81	80	80	80	79	79	78	78	77	77
9	82	83	83	82	82	82	81	81	80	80	80	80
10	84	85	85	84	84	84	83	83	82	82	81	81
11	86	87	87	86	86	85	85	84	84	83	83	83
12	88	88	88	88	87	87	86	86	85	85	85	85
13	89	90	90	89	89	88	88	87	87	86	86	86
14	91	91	91	90	90	90	89	89	88	88	88	87
15	92	93	92	92	91	91	91	90	90	89	89	89
16	93	94	94	93	93	92	92	91	91	90	90	90
17	95	95	95	95	94	94	93	93	92	92	91	91
18	96	97	96	96	95	95	94	94	93	93	93	93
19	97	98	98	97	97	96	96	95	95	94	94	94
20	99	99	99	98	98	98	97	97	96	95	95	95
21	100	100	100	100	99	99	98	98	97	97	96	96
22	101	102	102	101	101	100	100	99	99	98	98	98
23	103	103	103	103	102	102	101	101	100	99	99	99
24	104	104	104	104	103	103	103	102	101	101	101	100

Year 6 English EC4

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	106	106	106	105	105	104	104	103	103	102	102	102
26	107	107	107	107	106	106	105	105	104	104	104	103
27	109	109	109	109	108	108	107	106	106	105	105	105
28	110	111	111	110	110	109	109	108	107	107	107	106
29	112	112	112	112	112	111	110	110	109	109	108	108
30	114	114	114	114	113	113	112	112	111	110	110	110
31	116	117	116	116	115	115	114	114	113	112	112	112
32	119	119	119	118	118	117	117	116	115	115	115	114
33	121	121	121	121	120	120	119	119	118	118	117	117
34	124	125	125	124	123	123	122	122	121	121	120	120
35	128	128	128	127	127	126	126	126	125	125	124	124
36	131	131	131	131	131	130	130	129	129	129	128	128
37	134	135	135	134	134	134	133	133	133	132	132	132
38	138	138	138	138	138	137	137	137	137	136	136	136
39	**	**	**	**	**	**	**	140	140	140	140	140

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 EA4 and has a raw score of 20 would have a progress measure of 1006.

A learner in national curriculum Year 3 who has taken test EA4 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 2016 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 <http://learning.gov.wales/resources/browse-all/reporting-and-interpreting-national-test-results-2016/?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 EA4 and has a raw score of 30 it is possible to look up a Year 2 progress measure and a Year 3 progress measure. A raw score of 30 gives a Year 2 progress measure of 1027 which indicates that the learner has performed better than the average learner in Year 2. A raw score of 30 gives a Year 3 progress measure of 1015 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 EA4 raw score to progress measure conversion table

Total score	Progress measure Year 2	Progress measure Year 3
0	950	950
1	957	950
2	965	956
3	971	962
4	975	966
5	980	970
6	983	973
7	987	975
8	989	978
9	991	980
10	993	981
11	994	983
12	996	984
13	997	985
14	999	986
15	1000	988
16	1001	989
17	1003	990
18	1004	991
19	1005	992
20	1006	994
21	1008	995
22	1009	997
23	1011	998
24	1013	1000
25	1014	1001
26	1016	1003
27	1018	1006
28	1021	1008
29	1024	1011
30	1027	1015
31	1031	1020
32	1037	1026
33	1046	1035
34	1050	1050

Table 5: Year 4 and Year 5 Test EB4 raw score to progress measure conversion table

Total score	Progress measure Year 4	Progress measure Year 5
0	950	950
1	950	950
2	959	952
3	965	957
4	969	962
5	973	965
6	976	967
7	978	970
8	981	972
9	983	974
10	985	976
11	987	978
12	989	979
13	991	981
14	993	982
15	994	984
16	996	986
17	998	987
18	1000	989
19	1001	991
20	1003	992
21	1005	994
22	1007	996
23	1009	998
24	1011	1000
25	1013	1002
26	1015	1004
27	1017	1006
28	1020	1008
29	1022	1011
30	1025	1014
31	1029	1018
32	1032	1021
33	1036	1026
34	1042	1031
35	1049	1037
36	1050	1048
37	1050	1050

Table 6: Year 6 Test EC4 raw score to progress measure conversion table

Total score	Progress measure Year 6
0	950
1	950
2	950
3	950
4	955
5	960
6	964
7	968
8	971
9	974
10	977
11	979
12	981
13	983
14	985
15	987
16	989
17	991
18	993
19	995
20	997
21	999
22	1001
23	1003
24	1004
25	1006
26	1008
27	1011
28	1013
29	1015
30	1018
31	1020
32	1023
33	1027
34	1030
35	1034
36	1039
37	1046
38	1050
39	1050

