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## Rapid Computation of the Spache Revised Readability Formula

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# RAPID COMPUTATION OF THE SPACHE REVISED READABILITY FORMULA

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Many people who use readability formulas avoid using the Spache Revised Readability Formula (1974) because, they say, it takes too much time. Others claim that the math is too complicated for them.

Since the formula is supposed to be more precise at the primary levels than some of the other formulas, it is believed that many people would use it if the operations to determine the estimated readability level could be done quicker and with fewer calculations.

The purpose of this paper is to provide tables to be used with the Spache Revised Readability Formula in order that those persons who desire to use the formula but do not want to do all the calculations may do so.

The steps for using the revised formula tables are:

1. Count the number of words in the sample.\*
2. Count the number of sentences in the sample.\*
3. Count the number of "hard words" in the sample.\*
4. Using Table I, find the intersection of the number of words and the number of sentences in the sample.
5. Using Table II, find the intersection of the number of words and the number of "hard words" in the sample. (It should be noted that even with no "hard words", it is still necessary to use Table II.)
6. Add the numbers from steps 4 and 5 to determine the reading level of a particular sample.

An example for using these tables with a sample of 117 words, 8 sentences, and 4 "hard words" follows:

$$\begin{array}{rcl} 117 \text{ words and 8 sentences} & = & 1.770 \\ 117 \text{ words and 4 "hard words"} & = & + .939 \end{array}$$

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Readability Score 2.709 or 2.7

Hopefully, those persons who use or would like to use the Spache Revised Readability Formula will find the tables helpful.

\* As described in Spache (1974)

## REFERENCE

Spache, George. *Good Reading for Poor Readers*, Champaign: Garrard Press, 1974.

# TABLES FOR COMPUTING THE SPACHE READABILITY SCORES

Prepared by Lawrence L. Smith

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Table I Sentence Length

Number of Words in Sample

100	1.729	1.746	1.763	1.780	1.798	1.815	1.832	1.850	1.867	1.884	1.901	1.919	1.936	1.953	1.971	1.988	2.005	2.022	2.040	2.057	2.074
7	1.729	1.746	1.763	1.780	1.798	1.815	1.832	1.850	1.867	1.884	1.901	1.919	1.936	1.953	1.971	1.988	2.005	2.022	2.040	2.057	2.074
8	1.513	1.528	1.543	1.558	1.573	1.588	1.603	1.618	1.634	1.649	1.664	1.679	1.694	1.709	1.724	1.739	1.755	1.770	1.785	1.800	1.815
9	1.344	1.358	1.371	1.385	1.398	1.412	1.425	1.439	1.452	1.465	1.479	1.492	1.506	1.519	1.533	1.546	1.560	1.573	1.586	1.600	1.614
10	1.210	1.222	1.234	1.246	1.258	1.271	1.283	1.295	1.307	1.319	1.331	1.343	1.355	1.367	1.379	1.392	1.404	1.416	1.428	1.440	1.454
11	1.100	1.111	1.122	1.133	1.144	1.155	1.166	1.177	1.188	1.199	1.210	1.221	1.232	1.243	1.254	1.265	1.276	1.287	1.298	1.309	1.320
12	1.008	1.018	1.029	1.039	1.049	1.059	1.069	1.079	1.089	1.099	1.109	1.119	1.129	1.139	1.150	1.160	1.170	1.180	1.190	1.200	1.210
13	.931	.940	.949	.959	.968	.977	.987	.996	1.005	1.015	1.024	1.033	1.042	1.052	1.061	1.070	1.080	1.089	1.098	1.108	1.117
14	.864	.873	.882	.890	.899	.908	.916	.925	.933	.942	.950	.959	.968	.977	.985	.994	1.003	1.011	1.020	1.029	1.038
15	.807	.815	.823	.831	.839	.847	.855	.863	.871	.879	.887	.895	.903	.912	.920	.928	.936	.944	.952	.960	.968
16	.756	.764	.771	.779	.787	.794	.802	.809	.817	.824	.832	.839	.847	.855	.862	.870	.877	.885	.892	.900	.908
17	.712	.719	.726	.733	.740	.747	.754	.762	.769	.776	.783	.790	.797	.804	.811	.819	.826	.833	.840	.847	.854
18	.672	.679	.686	.692	.699	.706	.713	.719	.726	.733	.739	.746	.753	.760	.766	.773	.780	.787	.793	.800	.807
19	.637	.643	.650	.656	.662	.669	.675	.681	.688	.694	.701	.707	.713	.720	.726	.732	.739	.745	.751	.758	.764
20	.605	.611	.617	.623	.629	.635	.641	.647	.653	.659	.666	.672	.678	.684	.690	.696	.702	.708	.714	.720	.726
21	.576	.582	.588	.593	.599	.605	.611	.617	.622	.628	.634	.640	.645	.651	.657	.663	.668	.674	.680	.686	.691
22	.550	.556	.561	.567	.572	.578	.583	.589	.594	.600	.605	.611	.616	.622	.627	.633	.638	.644	.649	.655	.660
23	.526	.531	.537	.542	.547	.552	.558	.563	.568	.573	.579	.584	.589	.594	.600	.605	.610	.616	.621	.626	.631
24	.504	.509	.514	.519	.524	.529	.534	.539	.545	.550	.555	.560	.565	.570	.575	.580	.585	.590	.595	.600	.605
25	.484	.489	.494	.499	.503	.508	.513	.518	.523	.528	.532	.537	.542	.547	.552	.557	.561	.566	.571	.576	.581

# TABLES FOR COMPUTING THE SPACE READABILITY SCORES

Prepared by Lawrence L. Smith  
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Table II "Hard Words"

Number of Words in the Sample

100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
0	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659	.659
1	.741	.740	.739	.738	.737	.736	.736	.735	.734	.734	.733	.732	.732	.731	.730	.730	.729	.728	.728	.727
2	.823	.821	.820	.818	.817	.815	.814	.812	.811	.809	.808	.807	.805	.804	.803	.802	.800	.799	.798	.796
3	.905	.903	.900	.898	.896	.893	.891	.889	.887	.885	.883	.881	.879	.877	.875	.873	.871	.869	.867	.864
4	.987	.984	.981	.977	.974	.971	.968	.966	.963	.960	.957	.954	.952	.949	.947	.944	.942	.939	.937	.932
5	1.069	1.065	1.061	1.057	1.053	1.049	1.046	1.042	1.039	1.035	1.032	1.028	1.025	1.022	1.019	1.016	1.012	1.009	1.006	1.001
6	1.151	1.146	1.141	1.137	1.132	1.128	1.123	1.119	1.115	1.110	1.106	1.102	1.098	1.094	1.091	1.087	1.083	1.080	1.076	1.069
7	1.233	1.227	1.222	1.216	1.211	1.206	1.201	1.195	1.190	1.186	1.181	1.176	1.172	1.167	1.163	1.158	1.154	1.150	1.145	1.137
8	1.315	1.309	1.302	1.300	1.290	1.284	1.278	1.272	1.266	1.261	1.255	1.250	1.245	1.240	1.234	1.229	1.225	1.220	1.215	1.206
9	1.397	1.390	1.383	1.376	1.369	1.362	1.355	1.349	1.342	1.336	1.330	1.324	1.318	1.312	1.306	1.301	1.295	1.290	1.284	1.274
10	1.479	1.471	1.463	1.455	1.447	1.440	1.433	1.425	1.418	1.411	1.404	1.398	1.391	1.385	1.378	1.372	1.366	1.360	1.354	1.342
11	1.561	1.552	1.543	1.535	1.526	1.518	1.510	1.502	1.494	1.487	1.479	1.472	1.464	1.457	1.450	1.443	1.437	1.430	1.423	1.414
12	1.643	1.633	1.624	1.614	1.605	1.596	1.587	1.579	1.570	1.562	1.554	1.545	1.538	1.530	1.522	1.515	1.507	1.500	1.493	1.479
13	1.725	1.714	1.704	1.694	1.684	1.674	1.665	1.655	1.646	1.637	1.628	1.619	1.611	1.602	1.594	1.586	1.578	1.570	1.562	1.547
14	1.807	1.796	1.784	1.774	1.763	1.752	1.742	1.732	1.722	1.712	1.703	1.693	1.684	1.675	1.666	1.657	1.649	1.640	1.632	1.614
15	1.889	1.877	1.865	1.853	1.842	1.830	1.819	1.809	1.798	1.787	1.777	1.767	1.757	1.747	1.738	1.729	1.719	1.710	1.701	1.693
16	1.971	1.958	1.945	1.933	1.921	1.909	1.897	1.885	1.874	1.863	1.852	1.841	1.830	1.820	1.810	1.800	1.790	1.780	1.771	1.752
17	2.053	2.039	2.026	2.012	1.999	1.987	1.974	1.962	1.950	1.938	1.926	1.915	1.904	1.893	1.882	1.871	1.861	1.850	1.840	1.820

Number of "Hard Words"