

Converting a TAKS Scale Score to a Percentile Rank

To convert a TAKS scale score to a percentile rank, you must first have access to the appropriate TAKS scale score frequency distribution. Then a simple formula can be used to find the percentile rank of any TAKS scale score value.

The formula for the percentile rank is as follows:

$$PR(x) = ((f / 2 + L) / N) 100$$

where

x = scale score of interest

f = frequency of the scale score of interest

L = cumulative frequency associated with the next lowest scale score

N = population size (number of persons tested).

Example:

Below is a worked out example using the spring 2003 grade 11 mathematics TAKS. (You will need to look at the spring 2003 grade 11 mathematics TAKS frequency distribution on the next page to follow this example). Suppose we wish to find the percentile rank for the scale score of 2314. Looking at the frequency distribution on the next page, it can be verified that

$$x = 2314$$

$$f = 2887$$

$$L = 176201$$

$$N = 198622$$

and, thus,

$$PR(2314) = ((2887 / 2 + 176201) / 198622) 100 = 89.44 .$$

Usually, percentile ranks are expressed as whole numbers; in this case,

$$PR(2314) = 89.$$

TEXAS ASSESSMENT OF KNOWLEDGE AND SKILLS
 SCALE SCORE FREQUENCIES
 TAKS MATHEMATICS TEST
 ALL STUDENTS
 GRADE 11
 +- APRIL 2003 +-

MATHEMATICS SCALE SCORE

Scale Score	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1299	243	0.12	243	0.12
1442	13	0.01	256	0.13
1546	14	0.01	270	0.14
1609	17	0.01	287	0.14
1655	19	0.01	306	0.15
1692	31	0.02	337	0.17
1723	36	0.02	373	0.19
1749	46	0.02	419	0.21
1773	95	0.05	514	0.26
1794	174	0.09	688	0.35
1814	317	0.16	1005	0.51
1832	610	0.31	1615	0.81
1849	1091	0.55	2706	1.36
1865	1590	0.80	4296	2.16
1880	2216	1.12	6512	3.28
1895	3132	1.58	9644	4.86
1908	4059	2.04	13703	6.90
1922	4702	2.37	18405	9.27
1935	5470	2.75	23875	12.02
1947	5974	3.01	29849	15.03
1959	6470	3.26	36319	18.29
1971	7031	3.54	43350	21.83
1982	6775	3.41	50125	25.24
1993	7044	3.55	57169	28.78
2005	6872	3.46	64041	32.24
2015	6918	3.48	70959	35.73
2026	6537	3.29	77496	39.02
2037	6243	3.14	83739	42.16
2048	5959	3.00	89698	45.16
2058	5793	2.92	95491	48.08
2069	5708	2.87	101199	50.95
2079	5463	2.75	106662	53.70
2089	5135	2.59	111797	56.29
2100	4875	2.45	116672	58.74
2110	4674	2.35	121346	61.09
2121	4512	2.27	125858	63.37
2132	4383	2.21	130241	65.57
2143	4335	2.18	134576	67.75
2154	4011	2.02	138587	69.77
2165	3940	1.98	142527	71.76
2176	3766	1.90	146293	73.65
2188	3780	1.90	150073	75.56
2200	3620	1.82	153693	77.38
2212	3408	1.72	157101	79.10
2225	3277	1.65	160378	80.75
2238	3269	1.65	163647	82.39
2251	3191	1.61	166838	84.00
2266	3123	1.57	169961	85.57
2281	3158	1.59	173119	87.16
2297	3082	1.55	176201	88.71
2314	2887	1.45	179088	90.17
2332	2866	1.44	181954	91.61
2353	2743	1.38	184697	92.99
2375	2626	1.32	187323	94.31
2400	2494	1.26	189817	95.57
2429	2358	1.19	192175	96.75
2464	2119	1.07	194294	97.82
2507	1815	0.91	196109	98.73
2568	1350	0.68	197459	99.41
2668	838	0.42	198297	99.84
2808	325	0.16	198622	100.00

Frequency Missing = 54283