



Parenting Perspectives

...ideas to help your child succeed.



Understanding Test Scores

A primer for parents...

Norm-Referenced Tests

Norm-referenced tests compare an individual child's performance to that of his or her classmates or some other, larger group. Such a test will tell you how your child compares to similar children on a given set of skills and knowledge, *but it does not provide information about what the child does and does not know*. Scores on norm-referenced tests indicate the student's ranking relative to that group.

Typical scores used with norm-referenced tests include:



Percentiles. Percentiles are probably the most commonly used test score in education. A percentile is a score that indicates the rank of the student compared to others (same age or same grade), using a hypothetical group of 100 students. A percentile of 25, for example, indicates that the student's test performance equals or exceeds 25 out of 100 students on the same measure; a percentile of 87 indicates that the student equals or surpasses 87 out of 100 (or 87% of) students. Note that this is not the same as a "percent"-a percentile of 87 does not mean that the student answered 87% of the questions correctly! Percentiles are derived from raw scores using the norms obtained from testing a large population when the test was first developed.

Standard scores. A standard score is derived from raw scores using the norming information gathered when the test was developed. Instead of reflecting a student's rank compared to others, standard scores indicate how far above or below the average (the "mean") an individual score falls, using a common scale, such as one with an "average" of 100. Standard scores also take "variance" into account, or the degree to which scores typically will deviate from the average score. Standard scores can be used to compare individuals from different grades or age groups because all scores are

converted to the same numerical scale. Most intelligence tests and many achievement tests use some type of standard scores. For example, a standard score of 110 on a test with a mean of 100 indicates above average performance compared to the population of students for whom the test was developed and normed.

Scaled scores. Psychoeducational tests are typically made of several mini-tests, or subtests, which assess more specific skill sets. Performance on each subtest results in a scaled score. Scaled scores are often combined to form standard scores. The average range for a scaled score is 8-10, and 50% of all children at a given age will fall in this range.



T-scores. T-scores are another type of standardized score, where 50 is average, and about 40 to 60 is usually considered the average range. Be sure you know what the T-score is measuring, because a high score could be “good” or “bad” depending on whether the skill or attribute being measured is desirable or not. For example, a high score on aggressiveness would not be desirable, whereas a high score for social skills would be.

Age/Grade Equivalent scores. Some tests provide age or grade equivalent scores. Such scores indicate that the student has attained the same score (not skills) as an average student of that age or grade. For example, if Sally obtains a grade-equivalent score of 3.6 on a reading comprehension test, this means that she obtained the same score as the typical student in the sixth month of third grade. Sally may or may not have acquired the same skills as the typical third grader. *Age/grade scores seem to be easy to understand but are often misunderstood, and many educators discourage their use.*

Confidence Interval. Since a child’s performance on a test can vary on any given day, the confidence interval is the hypothetical range of scores predicted if your child were given this test 100 times. For example, a 95% confidence interval means there’s a 95% likelihood that your child would score in the given range if administered the test 100 times.

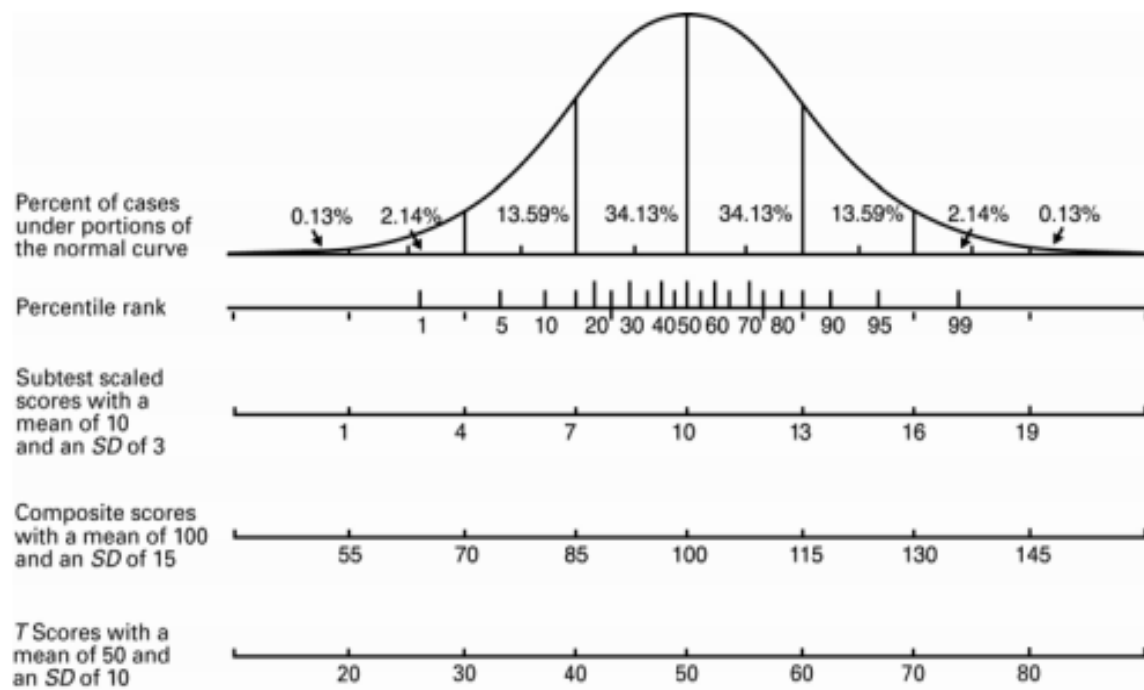
Qualitative Description. Qualitative descriptions are a quick, but somewhat arbitrary and oversimplified, interpretation of the scores in relation to same-age peers. The exact same score may be considered low average on one test and below average on another, depending on the interpretation of the test developers. This examiner generally uses the following guide when applying qualitative descriptions:



Qualitative Description	Scale Score	Standard Score	T-Scores	Percentile	Qualitative Description
Severely Below Average	0	50		<1	Severe Deficiency
	1	55	20 (80)	<1	
	2	60	23	<1	
	3	65	27	1	
Moderately Below Average	4	70	30 (70)	2	Moderate Deficiency
	5	75	33	5	
Mildly Below Average	6	80	37	9	Mild Deficiency
	7	85	40 (60)	16	
Average	8	90	43	25	Average
	9	95	47	37	
	10	100	50	50	
	11	105	53	63	
	12	110	57	75	
Mildly Above Average	13	115	60 (40)	84	Mildly Above Average
	14	120	63	91	
Moderately Above Average	15	125	67	95	Moderately Above Average
	16	130	70 (30)	98	
Significantly Above Average	17	135	73	99	Significantly Above Average
	18	140	77	>99	
	19	145	80 (20)	>99	
	20	150	83	>99	



Bell Shaped Curve. Standard scores, scaled scores, t-scores, and percentile ranks can all be compared using the "normal" or bell-shaped curve. Most tests used in education are developed in order to yield a standard curve of scores, where the majority of all students would fall within a small range (or one "standard deviation") of the mean or average score, and where 50% of all students would fall above and 50% would fall below the average score. Some tests, however, do not have such "normal" distributions of scores, and these different types of scores may not be comparable.



This primer has been adapted from:

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