

Chapter 1 : Percentile rank - Wikipedia

example, if your child has a percentile rank of 16, they fall in the 16th percentile and scored higher than 16% of children the same age who took the same test. If your child earned a percentile rank.

You see, my overall score put me in the 99th percentile. Mom and I worked this out some years later, when I was in college. I admit, though, that telling this story to my kids gave rise to a phrase we use in our family. My son started using it as a categorizer. If you are reading this and you are gifted, you understand this. If you are not gifted, you are probably insulted. This probably seems arrogant, intellectually snobbish, and unfair. You might feel looked down upon, less than, or demeaned. Many gifted minds just automatically categorize and sort life. Life is patterns to the gifted mind. What most people see as chaos and chance, gifted people perceive as patterns and statistics. Classifying people just comes with the territory for gifted people. And, still sub-consciously, we also tally that concerning the people around us, and we are vaguely aware of how much more often we are right than are others. And this sometimes gives us a confidence that normal people interpret as smugness or thinking that we are better than them. Problem is, our track record can be threatening to the normal people around us, even if we are humble about it. What if you are the parent of a 99 percentile child, particularly if you are not? A child who makes hugely insightful comments about the world at such a young age. They may deny their giftedness and intentionally choose to write wrong answers and appear less smart than they really are. Unless the child is homeschooled or is in a class for gifted children, then most likely their other classmates are pretty frustrated with them. After all, your child spoils the grade curve. Your child shows them up. I remember in high school, at youth group, we were having a team competition with Bible questions. Usually both teams would vie for me, since my high percentage of correct answers would give my team a distinct advantage. It happened this one day that I answered a question incorrectly. Now, everyone in the room had already given one or more incorrect answers. But it was unusual for me. I was so hurt! I had never ever suggested that I was perfect. Enough that I remember it clearly, 35 years later. It starts when they are young, encouraging them to share their day with you before they go to sleep. If you create an atmosphere where they feel comfortable telling you anything at all about their day, then later on they will be able to share their deep feelings with you, even when those deep feelings are hurt feelings. And you can comfort and encourage them.

Chapter 2 : Understanding Tests and Measurements for the Parent and Advocate - Apraxia Kids

Best Answer: Percentile is supposed to mean the percent of all the people who took the test that you scored HIGHER than. Since you can't score higher than yourself your percentile shouldn't be

Percentiles are then calculated from the z-scores for example, a z-score of 1. For more information on the LMS method, see <http://www.cdc.gov/growthcharts/clinical/qd.htm>. These BIVs flag e. A biologically implausible value is not necessarily incorrect, but the value should be further examined, possibly in conjunction with other characteristics of the child. Rationale The modified z-scores used for the upper range of valid values was changed in for a number of the growth chart parameters. Previously, the cut-points for extremely high values were based on recommendations from a WHO publication [1], but several papers [2-6] have since indicated that these cut-points were probably too restrictive. The WHO cut-points identified many values that were extremely high, but were probably not errors. These new z-score cut-points roughly correspond to the modified z-scores for the maximum values of the body size measures among 2- to year-olds in NHANES. We are not making changes to the cut-points for the extremely low values of the body size measurements. If BIV cut-points are used to exclude data, this change would likely affect comparisons of data calculated and cleaned using these new BIV cut-points with data that used the older WHO values. The effects of these changes will likely differ across datasets depending upon the true prevalence of extreme values and the accuracy of the recorded data. Because of the extensive data cleaning in NHANES, published estimates from these surveys do not exclude any of the extremely high values. In an analysis of PedNSS [6], compared with the WHO cut-points, the use of the cut points increased the prevalence of both obesity and extreme obesity by 0. Because of the relatively low prevalence of extreme obesity among children, particularly pre-school children, a 0. Data Errors These BIVs can be used to flag potentially problematic data points, and the cut-points were chosen to balance the inclusion of extreme values that are likely to be correct and the exclusion of those that are likely to be incorrect. However, other cut-points can be used and may be more appropriate based on other information specific to your data. If desired, the modified z-scores 3rd column of Table 2 can be used to construct other cut-points for extreme or biologically implausible values rather than relying on the BIV flag variables. This could be re-coded in the output dataset as: Once a data point has been flagged as a potential problem, other information from the child, if available, could be used to help identify errors and help in the decision to include or exclude the value. For example, if a child with an extremely high BMI also has a high skinfold thickness or arm circumference, the BMI value is more likely to be correct than if the other measure is low. Similarly, in a longitudinal study, one could assess whether a child with an extreme value at 1 time point also has a high value at other examinations. If only weight and height are available at a single examination, one might consider whether a child who has an extremely high weight is also very tall, and if there are other children who weigh nearly as much. Therefore, rather than using the BMI percentiles and z-scores to identify and characterize children with severe or extreme obesity, it is recommended that these high BMI values be expressed relative to the 95th percentile. The variables `bmiz` and `bmipct` in the SAS output should not be used in the classification of this subset of children with very high BMIs because the highest percentile that was estimated in the CDC growth charts was the 97th <https://www.cdc.gov/growthcharts/clinical/qd.htm>. The drawbacks of expressing very high BMIs as z-scores or percentiles have been emphasized by several investigators [7]. These 2 variables are likely to be better measures of adiposity among children who have very high BMIs than are z-scores and percentiles. `Bmipct95` can range from below 50 to over 100, and a child with a `bmipct95` of 100 would have a BMI that is equal to 1. For example, the CDC 95th percentile for a 12-month-old boy is 16.8 kg/m². The limitations of expressing extremely high BMIs as z-scores apply to both cross-sectional and longitudinal studies, including those that evaluate obesity interventions. Comparing methods for identifying biologically implausible values in height, weight, and Body Mass Index among youth. Prevalence of obesity and extreme obesity in children aged 8-17 years. Rapid infant weight gain predicts childhood overweight. The prevalence and validity of high, biologically implausible values of weight, height and BMI among 8-17 year olds. Severe obesity in children and adolescents: Using body mass index Z-score among severely obese adolescents: *Int J Pediatr Obes*. Comparison of methods to evaluate changes in relative body mass index in

pediatric weight control. Am J Hum Biol. What is the best measure of adiposity change in growing children:
Eur J Clin Nutr. Identifying the best body mass index metric to assess adiposity change in children.

Chapter 3 : IQ Test Scores: The Basics of IQ Score Interpretation

The child's scores on the 10 subtests are as follows: on 4 subtests, the child scores 10, on 3 subtests, the child scores 9, and on 3 subtests, the child scores 8. In this case, the overall composite score is 10 and the scatter is very minimal.

There are two types of testing recommended in the assessment of gifted children: IQ or ability testing, and achievement testing. Before you can consider this question for your child, you should be familiar what these tests are, and are not. Intelligence Testing Ability or IQ tests purport to show how smart a person is, how well they think, or what their capability is for learning. There are group and individual ability tests. Group tests may be administered in group or individual situations, but are normed scored for a very specific group of people, for example, 2nd graders in the spring of the school year. While these group ability tests have questions for other levels, the vast majority of the questions are exclusively for children who are commonly in the group being tested. This means, for gifted children, there are not a great number of questions to differentiate the gifted child from the average child, nor many, if any, questions to differentiate the various levels of gifted children. In some cases, while the correlation between group tests and individual IQ tests is quite high for average scores, that correlation almost disappears for gifted scores. This means that an average child will score very similarly on a group IQ test and an individual IQ test, but a gifted child may not score similarly at all. There are small studies showing that group tests may even result in a negative correlation for some gifted children. This means that the more gifted the child, the lower the group ability test score! Avant and Marcia R. Individual IQ tests tend to be more accurate for most of the population. These are the tests commonly used to "identify" gifted children, for participation in school programs for the gifted. But these tests are, in general, not designed to differentiate gifted children. In some cases, a specific test may not have been designed for use with the gifted; in other cases, getting a large enough "sample" of the various levels, at various ages, of gifted children is too prohibitive. Every test has a ceiling, a highest possible score. These scores vary by test, and each test is usually divided into subtests, each of which also have a ceiling. If a child "hits the ceiling" on several subtests, his overall score may be lowered by his lower subtest scores, resulting in an artificially depressed overall score. Ceilings vary from test to test, and within a test, from subtest to subtest. It is suggested by the publisher that gifted children over 6 years 0 months be tested instead on its sister test, the WISC. The WISC, too, has ceiling problems near its age boundary of 17 years 0 months. Gifted children over age 12 are often recommended to wait and be tested on the WAIS adult form when they are old enough, at 16 years 0 months. Test Scoring Terms Before further discussion of testing, it is important to understand what kind of results a test provides. There are many different numbers reported from a single test. A Standard Score SS represents a comparison of the child to the test population, where the average score is and there is a standard deviation, often 15 points. Scores above would be considered gifted if they are overall intelligence scores or gifted in that subject, for individual subjects. Tests also offer age-equivalent and grade-equivalent scores. These scores compare the child to the age and grade of average children who received similar scores. These scores do not mean that your child should jump into that grade level class, but scores more than a grade above the actual grade often do mean that the child needs something far more than is offered in his current grade level classroom. If these age-equivalent and grade-equivalent scores are the results of a grade level achievement test, then they must be taken with a grain of salt. Say your child received a grade-equivalent score of grade 6. That means that your grade 2 child scored as well on this test as a child of grade 6. It does not tell how your child would score on a grade 6 achievement test. Group achievement test scores are rarely valuable if they are more than grade levels above or below the grade level the test was designed for. Percentile scores compare your child to the rest of the norming population of a test. Their percentile would be That is, they scored better than 92 percent of the students taking the test. This means that the confidence interval associated with a specific score may be quite large. Achievement Testing Achievement tests are tests designed to see what a student has already learned. Again, there are group and individual achievement tests. Group tests are usually given to a large population at once, but the same group test may be administered to a single child individually. Even administered individually, it is still a group test, subject to the advantages and

disadvantages of group achievement tests. Group achievement tests are written for a single grade level, or part of a grade level 5th grade, or spring of 2nd grade. They are given to the group, and the results are compared to a group of children. These tests have little "headroom," few questions that are more than a single grade higher or lower than the grade level of the test. Scores of 95th percentile or better do not give much information, except that the child is above his grade level in the subject or overall. To get a more accurate idea of where a gifted child truly falls compared to his grade level, he should take an individual achievement test, or an out of level achievement test. And group tests, whether group intelligence or group achievement tests, have another problem for some of our gifted kids: Since the questions on a group test are all in written format for easy group administration, our kids often see more than one answer to a question. For example, the question "A girl had 49 of something and got 7 more, what would you use to solve the question of how many does she have now? But both answers could be justified, and on a group test, there is no tester interaction to prompt "why did you pick that? Thanks to Amy and her daughter for this example. Most of these tests reach up to end of high school norms - grade level This is equivalent in math, for example, to about Algebra I level. Many of our gifted kids reach that level in elementary school! For this reason, the WJ-III is recommended as an individual achievement test for upper elementary and older gifted students, who might reach the ceiling on a test that ends at high school level. These tests are administered individually, usually by a psychologist or counselor, depending on the test and your state law. The results include age and grade equivalent scores, and percentiles, comparing your child to the average child at the specified grade levels. Often confusing, it is best to remember that the "expected" achievement for a high school senior, in math for example, is about the end of Algebra I. These grade levels are not grade levels for college bound seniors, and should be considered appropriately. Out of Level Achievement Testing Another way to use group achievement tests is for out of level Talent Search achievement testing. Most of this out of level testing is conducted through the major and state Talent Search programs. Out of level testing can differentiate those scoring in the top percentiles on grade level achievement tests. Two students, both scoring in the th percentile on their grade level tests, may then score very differently on an Explore test 3 grade levels up. In fact, research has shown that taking the top 5 percent of students, and giving them out of level testing, results in another normal distribution of scores among those students, with the top students still scoring at the top end of the higher test, and students distributed across the entire score spectrum of the test. Hansen for a table of scores. Curriculum based assessment CBA is a different kind of achievement assessment. While this type of assessment sounds like the perfect way to prove whether a gifted child knows the material to be covered, there can be difficulties with curriculum based assessment. Terminology can be problematic. Consider the child who attended 3 schools in 3 years: In the third school, the child was completing a chapter by chapter CBA, and was asked to "complete the following problems using renaming. The child left those questions blank; she had no idea what renaming meant. The assessment was halted since the child did not pass that chapter, and the child returned to the grade level classroom. She learned nothing new in math all year.. Other difficulties with CBA include deciding what score is required to prove competence. In grades and subjects where chapter or text tests are not available, determining what to include in CBA is difficult at best. Sitting the child in a room, day after day, week after week, completing chapter test after chapter test, beginning with the current grade level and slowly moving up through grades can be torture for the gifted child. Choosing an appropriate starting level for the CBA is imperative. Ceilings All achievement and intelligence tests have ceilings, highest possible scores. Most tests have subtests, and each subtest has a ceiling, sometimes the same as the other subtests, sometimes different, and in gifted children these subtest ceilings contribute to lowering the overall test score if a child is not evenly or "globally" gifted. Some tests, though they have fairly high ceilings, were not designed to test all the way up to those ceilings - they are only there for subtest head room for the lower scores. So how do you know if your child has reached a ceiling on a test? Are these not ceilings? There are two ways to identify a ceiling. First, if the child answered any more questions correctly, could she score any higher on the subtest? If the answer is no, she could not score any higher, then it is a ceiling. Second, was the termination criteria for the subtest reached? Tests have specific requirements for stopping a subtest. Commonly, the student must get less than x questions correct of the last y questions asked. If the child did not reach the termination criteria, he hit the ceiling. Either one of

these events indicate a test ceiling was reached. Is it the inside of the roof? Or is there one more floor, or ten more floors? The overall test score is calculated from all the subtests, so if she hit a ceiling on several subtests, and those ceilings really were her stopping point, perhaps the overall score is correct. But what if those ceilings should really have been higher Then the low ceilings will average in with her other subtest scores, and lower - or drastically lower - the overall score called full scale score, GIA, etc. This is particularly likely in a child with uneven giftedness, a Highly Gifted child, or a Twice Exceptional child.

Chapter 4 : The 99 percentile child | Socially Awkward: Gifted and Misunderstood

If your child earns a standard score (SS) of , this score is zero deviations from the Mean because it is at the Mean. If your child scores one Standard Deviation above the.

Raw score is simply the number of questions answered correctly, out of the number of questions available. This information is rarely given in a score report, but can usually be obtained from the tester, or from the principal the data he receives from the test company in the case of group grade level achievement tests. Then you can compare the raw score to the percentile. The child who received the 90th percentile, considered well below gifted, may actually have answered only 0 or 1 or 2 questions incorrectly. The raw score would explain this apparent discrepancy between percentile and expected score. Age- and grade-level equivalents describe the age or grade of the average child receiving the same score as this child. Most tests offer standard scores, percentiles, and age- and grade-equivalent scores, so that parents and teachers have a variety of ways to compare the students. As gifted kids move up in grades, their age- and grade-equivalent scores will become unusually high, because though they are attending classes with the brightest kids in their grade, the age- and grade-equivalent scores compare them only to average kids in their grade. And for the very youngest gifted students grades K-1 age- and grade-equivalent scores may be inflated by early reading or number literacy. Achievement tests assume that basic reading and arithmetic skills will be in place by 3rd grade; gifted kids often enter kindergarten with these skills. This can result in grade 2 or 3 equivalent scores almost immediately upon school entrance. For some gifted children, grade-equivalent scores will moderate in the next year or two, as other children accomplish these skills. If the school does not give the parents a full score report including age- and grade-equivalent scores, standard scores, and percentiles, the parent has the right to ask for and receive a full report including these scores. Family Educational Rights and Privacy Act FERPA is the federal law protecting parents rights not only to privacy, but to receive the full educational information on their children. If it does not, the parents are in a strong position to sue the school or district. See Gifted Advocacy for more details. The Texas Education Association describes it this way: Confidence interval is a common use of the SEM. Standard deviation is a statistical measure of spread. By definition, gifted is considered to be two standard deviations or above on a standard measure of intelligence. Types of tests Understanding the results of testing and assessment must begin with understanding the tests. There are a variety of tests available, and a variety of types of tests available. Understanding test results begins with understanding what kind of tests were given. There are two general categories of tests used with gifted children: Intelligence tests tell us how capable a person is of learning, and achievement tests tell us how much they have already learned. But its only one of many indicators, called factors of intelligence. Within these two major types of tests, there are two major subsets of tests: Group tests are usually written with a few exceptions for the youngest children , and are given in silence to a large group of children. The test proctor is usually a teacher or an aide, and is generally untrained in the test; they are given instructions to follow on how to proctor the test. Individual tests may include a written component, but are conducted mostly verbally, and in a one on one situation with tester and the subject. In this case, the tester is well-trained in the test protocol, and has a detailed script to follow, including options and prompts that may be used as the testing situation warrants. Consider the difference between group and individual tests. In a group test, the questions are written and fixed, and designed for the average person to answer. This might be no problem for an average student, or even a moderately gifted student, but the gifted student sometimes reads more into the questions than intended. Most students would pick the vegetable. But say that 3 of the 4 names of the items, including the vegetable, were 6 letters long, and one of the fruits had a 5 letter name. Then which one should the gifted child pick? To further complicate the situation, 3 of the 4 are grown in sub-tropical climates outside the U. Now which should the gifted child pick as the "odd one out? And on that group test, when the child gives an "unusual" answer, the tester is not there to prompt, "Why did you choose that? Or the proctor is walking around, or turning pages, or snoring. And while it is true that all the kids taking the test are exposed to the same distractions, consider The nature of the gifted child is that she takes in knowledge at a faster rate than her peers. But it is not just knowledge - she takes in

everything faster, deeper, with more feeling. Even her senses deliver data to her brain faster - hearing, touch, sight. Those classroom distractions are more distracting to her than they are to her classmates. For all these reasons, group tests tend to underestimate the gifted, more than the average child. Intelligence Tests Group intelligence tests are commonly used as screening measures, to see if the child should move to a full gifted assessment. They are commonly administered by teachers. Group tests are generally normed on populations of all children, with relatively few gifted children among the mix. When taking group intelligence tests, gifted kids often "over-think" the questions, and perhaps make wrong selections. Notable gifted professionals recommend them for screening potentially gifted children. While the correlation between group and individual intelligence tests is quite high for average scores, in this study that correlation almost disappeared for gifted scores. This means that while an average child will score very similarly on a group IQ test and an individual IQ test, a gifted child may not score similarly at all. And the study suggests that this group test may even result in a negative correlation for some gifted children: Avant and Marcia R. Individual IQ tests must be given by a school or counseling psychologist. Some tests also have a "brief" version that can be administered to an individual child in minutes, e. Brief tests are designed as screening measures, to determine which students should proceed to a full evaluation. Schools and districts sometimes use these brief measures as the only evaluation, resulting in an incomplete assessment of the gifted children. Brief measures have so few questions that they can result in scores that do not correlate well to full intelligence tests. Achievement Tests Grade-level or group achievement tests are criterion-referenced, so they contain questions covering just about every aspect of the curriculum at that grade level. These tests have little or no content to determine just how far above or below grade level a student might be. They can only determine if the child is at, below, or above grade level. For example, a 3rd grader gets a grade-equivalent score of grade 5. This does not tell us anything about how the 3rd grader might score on a 5th grade test; instead it means that, had a late 5th grader taken the same 3rd grade test, he would have scored similarly to this student. Of these, the ITBS can be scored both as criterion-referenced and norm-referenced. The ITBS, too, gives us a clue in its name: Grade-level achievement tests are only a measure of basic skills. Individual achievement tests have advantages and disadvantages. The test, however, has fewer questions at each grade level than a group grade level achievement test, and contains mostly those questions designed to differentiate between the grade levels. Individual achievement tests may be given by guidance counselors, or by school or counseling psychologists. But individual achievement test scores are not perfect. They are norm-referenced, so they compare the child to the average of all children across the U. This comparison might not be perfect - you might live in a university town, where the population is skewed towards the high side, or an area where the population is skewed towards the low side. Thanks to No Child Left Behind, though, it is common, especially at the elementary levels, for all schools to offer pretty much the same level of curriculum. This means that if your 3rd grader receives a grade equivalent score on an individual achievement test of grade 5. More comprehensive testing would be needed to make that determination -- Curriculum Based Assessments CBAs are best for this further evaluation. Individual achievement test scores can be misleading at the pre-school and kindergarten levels, if the child is already reading and doing arithmetic -- these abilities are not expected in this age group, so precocious readers or mathies will score significantly above their age level, just because they are precocious readers or mathies. This gap may or may not continue as the child ages; some precocious kids, particularly those who are pushed to read or calculate early, will "level out" as their peers gain similar skills. Some gifted children, particularly those who read or calculate very early and seemingly without instruction, will continue to make gains in reading, calculating, and possibly other areas, at the phenomenal pace they have already established for their own learning. Individual achievement test scores also become less useful as the grades increase, since college bound kids are taking higher level courses much earlier than the average high school graduate. For example, the average math level of a 12th grader nationally is Algebra I. But our college bound gifted kids commonly reach the Algebra I level in 8th grade - some four years earlier. And many gifted kids reach that Algebra I level even earlier! Reading levels continue to be deceptive, since once an 8th grade reading level is reached, the child can read just about anything How Can You Tell? Because individual achievement tests only compare the child to an average student of grade x, it is important to be aware of the ceilings on these tests. This level is

NOT saying the child is ready for graduate school, however. The "grade levels" above grade 12 are calculated as a straight-line increase as compared to average grade 12 levels, NOT compared to college-bound students. Out-of-level achievement tests are group achievement tests, but given to students grades below the grade level of the test. Since these tests are given to younger-than-normed gifted kids, they give more details of the actual academic achievement levels of the gifted child. Some of these tests give only verbal and mathematics scores, while others offer additional subject scores in science and social studies. Out-of-level achievement tests are used by Talent Searches to "comb out" the upper 5 percent. Children who score in the 95th percentile or above, qualify for these out-of-level tests. The results curve from this tiny percentage of the upper tail of the original "bell curve" is another full "bell curve" where the gifted students tend to score at the 50th percentile or above. Talent Search results can show us how far above level a child is achieving. A 5th grade Terra Nova given to a 4th grader will show how that 4th grader compares to the students normally given the 5th grade test, thus showing if the 4th grader is well-prepared to skip into grade with the comparable students. For those subjects that offer them, CBAs may simply be the mid-term or final exam for the course.

Chapter 5 : Child-Pugh Score for Cirrhosis Mortality - MDCalc

If a child answers 25 questions correctly on a 50 question test he would earn a percentage score of 50%. If he answers 40 questions on the same test his percentage score would be 80%. Percentile, however, refers to the number of other test takers' scores that an individual's score equals or exceeds.

Resources about testing Introduction Most parents of special needs children know that they must understand the law and their rights. Few parents know that they must also understand the facts. Changes in test scores over time provide the means to assess educational benefit or regression. Important educational decisions, from eligibility to the intensity of educational services provided, should be based on the results of psychological and educational achievement testing. Parents who obtain appropriate special education programs for their children have learned what different tests measure and what the test results mean. These parents are often right. However, in most cases they do not have the evidence to support their belief, nor do they know how to interpret and use the evidence contained in educational and psychological tests. They need evidence to support their beliefs. Critical educational decisions are often based on the subjective beliefs of parents and educators. As a parent, you may believe that your child is not making adequate progress in a special education program. Appropriate educational decision-making must be based on objective information and facts, not subjective emotional reactions and beliefs. Tests administered to children fall into several categories: Statistics are ways to measure progress or lack of progress, using numbers. As you read this article, you will learn what tests and evaluations measure, how this information is reported, and how to use information from tests to measure and monitor academic progress. Shannon Carter , U. In Carter, the school system defaulted on their obligation to provide a free appropriate education to Shannon Carter, a child with learning disabilities and an Attention Deficit Disorder. Shannon was evaluated by a public school psychologist who described her as a "slow learner" who was lazy, unmotivated and needed to be pressured to try harder. Her parents pressured her to work harder. In the ninth grade, despite intense pressure, Shannon failed several subjects. Educational achievement testing demonstrated that sixteen-year-old Shannon was reading at the fifth grade level 5. She was finally found eligible for special education. As she prepared to enter tenth grade, she was also functionally illiterate. This IEP proposed that after a year of special education, Shannon would read at the 5. In other words, after a full year of special education to remediate her learning disabilities, Shannon was expected to make only four months of progress in reading and math. Progress would be measured by her scores on the Woodcock-Johnson and KeyMath educational achievement tests. She would progress from the 5. They felt that the proposed program was inadequate, and worried that Shannon would still be functionally illiterate when she graduated from high school three years later. Emory Carter insisted that the school teach his daughter to read, write and do arithmetic at a high school level when she graduated from high school. Although Emory and Elaine Carter shared their concerns and wishes with the public school officials, the administrators took a "take it or leave it" position. They refused to provide Shannon with a more intensive special education program where she would receive remediation in reading, writing, and arithmetic. The parents requested a special education due process hearing. The parents appealed this decision to a Review Panel. The Review Panel upheld the decision of the Hearing Officer. Trident Academy is a private school that specializes in educating and remediating children with learning disabilities, including dyslexia. When Shannon graduated from Trident Academy three years later, her reading and math scores were on a high school level. What evidence caused him to decide that Shannon received an appropriate education at Trident Academy? Judge Houck knew the importance of accurately interpreting test scores. See also *Hall v. NC* , affirmed at F. Circuit Court of Appeals for the Fourth Circuit. Appeals from the U. Court of Appeals for the Fourth Circuit by a three judge panel. Circuit Courts of Appeals are filed in the U. Court of Appeals will convene all Judges appointed to the Circuit to hear a case. This is called an en banc review. A Individualized Education Program. Special Education Law, 2nd Edition, page See also the "Definition of individualized education program" in the federal special education regulations, Volume 34 of the Code of Federal Regulations, 34 CFR District Court and the Fourth Circuit found that the proposed gain of four months after a full year of special education

was "wholly inadequate. Johnny is a child who has a learning disability that affects his ability to read. In reading, Johnny is below grade level. Instead of developing an IEP that will measure his progress in reading on specific objective tests, the special education staff may write a goal like this: When parents object and request a more intensive program that includes clear objective scores, they are often rebuffed or criticized. In many areas, school board counsel and state departments of education advised schools to stop using objective measurements of progress tests to measure progress for special education children. If you believe that the special education your child is receiving is inadequate, you must have evidence to support your position. You will find this evidence in the public school and private sector testing that has been or will be completed on your child. To master the material in this article, you should expect to read the article at least three times. When you take this step, you will know what tests and evaluations measure and how test results are reported. You will know how to convert scores on different tests into numbers that are easily understood. Michael Three years ago, your eight-year-old son Mike began to have serious difficulties in school. By the time he entered third grade, you were deeply concerned about his difficulties in learning to read. His handwriting was nearly illegible. Homework was a nightmare. You attended a meeting of this committee. Relieved that something would be done to help you child, you consented to these tests. According to the evaluations, your son has a learning disability. Based on the results of the evaluations, your son was found eligible for special education services at his neighborhood school. It was your understanding that Mike would receive individualized help in reading and writing from a teacher who was specially trained to remediate his learning disability problems. Three years have passed. He still has difficulty reading aloud. His spelling is poor, and his handwriting is unreadable. He is behind most of the children in his class. His attitude has changed. He is angry and depressed and says he "hates school. From your perspective, patience is not the issue. You are worried that your son will never master the basic academic skills. You are worried about his future. The IEP team disagreed with you. One person said that Mike was getting all the help he needs and that he was really doing quite well. What should you do? You know that time in the LD resource class with several other children is not providing Mike with the individualized help he needs. The school is not teaching your son how to read, write and do arithmetic. Instead, his IEP team wants to lower the bar. They suggest more "accommodations" and "modifications. They do not propose to give him the individualized help he needs so he can learn to read, write, and do arithmetic. How will you know when he is getting the help he needs The process of educational decision-making Legal requirements: If parents do not accept the responsibility of learning this information, they leave interpreting the test data to the school psychologist. The school psychologist often has very little information about your child, aside from scores on tests administered years ago. The basic principles of tests and measurements are not difficult to learn. As you read this article, you will see that you are already familiar with many of the concepts discussed. Statistics and statistical terms are used in many other areas of life, from business and sports to medicine. Newspaper and magazine articles use statistics to inform readers about change or lack of change. You read articles about changes in the population, the climate, the economy. Even public opinion polls include statistical information to inform you or persuade you of a point. As a parent, you need to expend time and effort to develop a basic understanding of statistics. To accomplish this goal, you should reread parts of this article several times. Underline, make margin notes, and use a highlighter. Be patient and put in the time. As you study this material, you are likely to see some terms and concepts that are confusing at first terms like standard deviation, standard scores, and grade and age equivalents.

Chapter 6 : Why Should I Have My Child Tested? | Hoagies' Gifted

scored as well as or higher than 64 percent of his/her peers in the national sample. The National Percentile Range indicates where your child's true percentile ranking likely falls.

Gardner says that our schools and culture focus most of their attention on verbal-linguistic and logical-mathematical intelligence. We esteem the highly articulate or logical people of our culture. Gardner however says that we should place equal attention on individuals who show gifts in the other intelligences. The theory of multiple intelligences proposes a major transformation in the way our schools are run. It suggests that teachers be trained to present their lessons in a wide variety of ways using music, cooperative learning, art activities, role play, multimedia, field trips, inner reflection, and much more. The IQ is, at best, a rough measure of academic intelligence. It certainly would be unscientific to say that an individual with an IQ of 100 is of high average intelligence, while an individual with an IQ of 90 is of only average intelligence. Such a strict classification of intellectual abilities would fail to take account of social elements such as home, school, and community. These elements are not adequately measured by present intelligence tests. Furthermore, it would not take account of the fact that an individual may vary in his test score from one test to another. In addition, Gould described the biasing effect that tester attitudes, qualifications, and instructions can have on testing. In another study, Ysseldyke et al. Provided with forms containing information on 41 test or subtest scores including the WISC-R IQ test of nine school-identified LD students and nine non-LD students, judges were instructed to indicate which students they believed were learning disabled and which were non-learning disabled. The school psychologists and special-education teachers were able to differentiate between LD students and low achievers with only 50 percent accuracy. The naive judges, who had never had more than an introductory course in education or psychology, evidenced a 75 percent hit rate! Measures of intelligence may be valuable although the value is often overrated but much harm can be done by persons who try to classify individuals strictly on the basis of such measures alone. No one should be either alarmed or discouraged if he finds that his IQ is not as high as he might have hoped. Remember that many elements besides IQ contribute to success and happiness. Also note that IQ is not a fixed quantity, but can be increased by means of education. This was demonstrated by an experiment at the Glenwood State School as well as numerous other research studies. A particularly interesting project on early intellectual stimulation involved 25 children in an orphanage. These children were seriously environmentally deprived because the orphanage was crowded and understaffed. Thirteen babies of the average age of 19 months were transferred to the Glenwood State School for retarded adult women and each baby was put in the personal care of a woman. Skeels, who conducted the experiment, deliberately chose the most deficient of the orphans to be placed in the Glenwood School. Their average IQ was 64, while the average IQ of the 12 who stayed behind in the orphanage was 77. In the Glenwood State School the children were placed in open, active wards with the older and relatively brighter women. Their substitute mothers overwhelmed them with love and cuddling. Toys were available, they were taken on outings and they were talked to a lot. The women were taught how to stimulate the babies intellectually and how to elicit language from them. After 18 months, the dramatic findings were that the children who had been placed with substitute mothers, and had therefore received additional stimulation, on average showed an increase of 29 IQ points! A follow-up study was conducted two and a half years later. Eleven of the 13 children originally transferred to the Glenwood home had been adopted and their average IQ was now 93. The two children who had not been adopted were reinstitutionalized and lost their initial gain. The control group, the 12 children who had not been transferred to Glenwood, had remained in institution wards and now had an average IQ of 66 an average decrease of 21 points. When these children reached young adulthood, another follow-up study brought the following to light: Yet when raised on a kibbutz, children from both groups have an average IQ of 100. In another home-based early enrichment program, conducted in Nassau County, New York, an instructor made only two half-hour visits a week for only seven months over a period of two years. He spent time showing parents participating in the program how best to teach their children at home. In addition, they have consistently demonstrated superior ability on school achievement tests. More

About Edublox Online Tutor Edublox Online Tutor offers multisensory cognitive training that enables learners to overcome reading problems and learning challenges and reach their full potential. Our programs are founded on pedagogical research and more than three decades of experience demonstrating that weak underlying cognitive skills account for the majority of learning difficulties. Specific brain-training exercises can strengthen these weaknesses leading to increased performance in reading, spelling, writing, math and learning. Its Principles and Applications 6th ed. Harcourt Brace Jovanovich, Inc. Norton, , , cited in R. Allyn and Bacon, , Tyler, cited in A. American Council on Education,

overall severity of a child's emotional and behavioral problems. questions were scored 0, 1, 2, so that a income as a percent of the poverty level.

At the time of testing, Amy was years old and in the fifth grade. She scored at the mean for her peers, i. If we tested a 20 year old person and found that this person was able to do 10 push-ups, then the 20 year old has an age equivalent score of and a grade equivalent score of 5. Although he is in the fifth grade, Frank is 13 years old! The average score for 8th graders who are 13 years old is When we compare Frank with other children in his expected grade, we see that his achievement is in the average range. Frank is in the 95th percentile level when compared to fifth graders, not when compared to eighth graders. Frank age 13 was included in our sample of 5 th graders who had an average age of First, we see that Frank performs at a superior level when compared with other children in his grade. Second, we see that he performs at an average level when compared with children who are his age. When you evaluate the significance of data from tests, you must know how the scores are being reported. Test scores can be reported using percentile ranks, age equivalents, grade equivalents, raw scores, scale scores, subtest scores, or standard scores. But “ if Frank was an 8 year old 3rd grader, his scores would be in the superior range, using both age equivalent and grade equivalent measures. The number of push-ups each child completed was his or her raw score. To obtain an overall or composite score, we will measure three skills sit-ups, push-ups, a timed 50 yard dash and obtain scores on each of these skills. After we convert the raw scores to scale scores, we will be able to compare each of the three scores to each other number of push-ups, number of sit-ups, seconds to complete the 50 yard dash. How do we convert raw scores into scale scores? One way to convert scores is by developing a rank order system. In rank order scoring, the child who scores highest in an event most push-ups, most sit ups, fastest run receives a scale score of ; the lowest receives a score of 1. Was the child able to do significantly more push-ups after taking the fitness course? Was the child reading better after receiving reading remediation? This is exactly what happens with educational achievement and psychological tests. Most educational tests are composed of several subtests; the subtest scores are combined to develop composite scores. More about this shortly. John is a member of our original group of fifth graders. But, John is very slow and uncoordinated. His individual scores demonstrated a significant amount of subtest scatter. When you analyze his three subtest scores, you see that he has specific strengths and a very severe deficiency. Despite his average composite score, John is not an average child! As noted above, the proper calculation is to use the standard scores. Oscar was at the 1 percent level in push-ups. Is Oscar really an average child? Would he benefit from remediation to improve his upper body strength, as measured by push-ups? Oscar also a great deal of subtest scatter, i. Subtest Scatter When subtest scores vary a great deal, this is called subtest scatter. If significant scatter exists, this suggests that the child has areas of strength and weakness that need to be explored. How can you determine if significant subtest scatter is present? Most subtests have a mean score of If the mean on a subtest is 10 and most children score between 7 and 13 , then scores between 9 and 11 will represent minimal subtest scatter. Lets assume that Child A is given a test that is composed of 10 subtests. In this case, the overall composite score is 10 and the scatter is very minimal. This child scored in the average range in all 10 subtests. In our next example, we will assume that Child B earns 4 subtest scores of 10, 3 scores of 4, and 3 scores of The child did extremely well on 3 tests, very poorly on 3 tests, and average on 4 subtests. Subtest scatter is the difference between the highest and lowest scores. The spread or variability between the subtest scores is called subtest scatter. The results of educational tests given to children are often provided in composite scores. Each of these IQs are composite scores. Both the Verbal and Performance IQ scores are composites of five different subtests, each of which measures a different area of ability. The Full Scale IQ is a composite of the Verbal and Performance scores “ which makes it a composite of ten different subtests. Katie is the 14 year old youngster whose situation was outlined earlier in this article. The Woodcock-Johnson consists of a number of mandatory and optional subtests. The results obtained by the child on these different subtests are combined into composite or cluster scores. To advocate effectively, parents must obtain all of the subtest scores on the

tests that have been administered on their child. When Apparent Progress Means Actual Regression One serious concern that many parents have relates to the belief that their child is not making adequate progress in a special education program. How can parents determine if their perception is accurate? And, how can parents persuade school officials that the special education program being provided to the child needs to be strengthened? Earlier in this article, we discussed how statistics can be used in medical treatment planning. We demonstrated how a medical problem was identified and the efficacy of treatment measured, using objective tests. In our example, the patient had pre- and post- testing as a means to determine whether or not the intervention was working. Based on the results of new testing, more medical decisions would be made to continue, terminate or change the treatment plan. This practice of measuring change, called pre- and post-testing, has great relevance to educational planning. In this way, pre- and post- testing enables us to measure educational benefit or lack of educational benefit. According to our earlier testing in September, Erik completed 13 push-ups which placed him in the top 84 percent of all youngsters in his class. After a year of fitness training, all of the fifth grade children were re-tested. When Erik was re-tested, he completed 14 push-ups. The average performance of the fifth grade class improved by 2 push-ups from an average raw score of 10 to an average raw score of 12. While still ahead of his peers, Erik did regress. According to the new scores, his percentile rank dropped from the 84 percentile to about the 90th percentile rank. Sam is continuing to fall further behind his peer group. Now, we have three sets of test data beginning 5th grade, end 5th grade, beginning 6th grade. If his percentile rank continues to drop, Sam is experiencing regression. We need to know how long will it take for Sam to recoup the skills he lost during the summer. Norm Referenced versus Criterion Referenced Tests Most standardized tests are either norm referenced or criterion referenced. Both Erik raw score of 13, percentile rank of 84 and Sam raw score of 7, percentile rank of 16 were referenced or compared to this norm group of fifth graders. In our example, we also referenced the criteria of number of push-ups completed. A criterion reference analysis determines whether or not a child meets certain criteria without reference to a norm group. For example, at the beginning of the year, Sam completed 7 push-ups. If the criteria for success was 8 push-ups, then Sam failed to reach that goal. Does Sam now meet the criteria for success? The answer to this question depends on whether the criteria have increased now that Sam is a year older. Another factor complicates this picture. Definitions of success are affected by the passage of time. If we rely on criterion referenced measures, we can be misled as to whether the child is falling further behind the peer group. We need to know exactly what the criterion is and what this means when the child is compared to a norm group. Standard Deviation Percentile ranks are computed by determining the mean score and the amount of variation of all scores around the mean score. Are the scores bunched around the number 10 in a tight uniform distribution? Are the scores evenly distributed? Do they peak and taper slowly in our earlier bell curves, or do they bunch at the ends, without any scores in the middle? In other words, is there a great variance, with the scores spread over a wide range with two or more peaks, or is there a normal bell curve distribution of scores? On our push-up test, most of the 5th grade children earned scores around 10 push-ups, with an even distribution above and below 10 push-ups. But, if one-half of the children completed 5 push-ups, one-fourth completed exactly 14 push-ups, and the remaining one-fourth completed 16 push-ups, then the average or mean number of push-ups would still be 10. One-half of the children would have scored above 10 and one-half below. In this case, the distribution is not evenly distributed in a smooth curve above and below the score of 10. In fact, the variance is very large and would present a highly unusual curve with a peak at 5, a drop to zero between 6 and 13, then a jump at 14, a drop at 15, another jump at 16. This distribution of scores would not present a normal bell curve distribution. Educational and psychological tests are designed to present normal bell curve distributions with predictable patterns of scores. We simply need to know the mean and standard deviation of the test. In most educational and psychological tests, the mean is and the standard deviation is

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The percentile rank of a score is the percentage of scores in its frequency distribution that are equal to or lower than it. For example, a test score that is greater than 75% of the scores of people taking the test is said to be at the 75th

percentile, where 75 is the percentile rank.