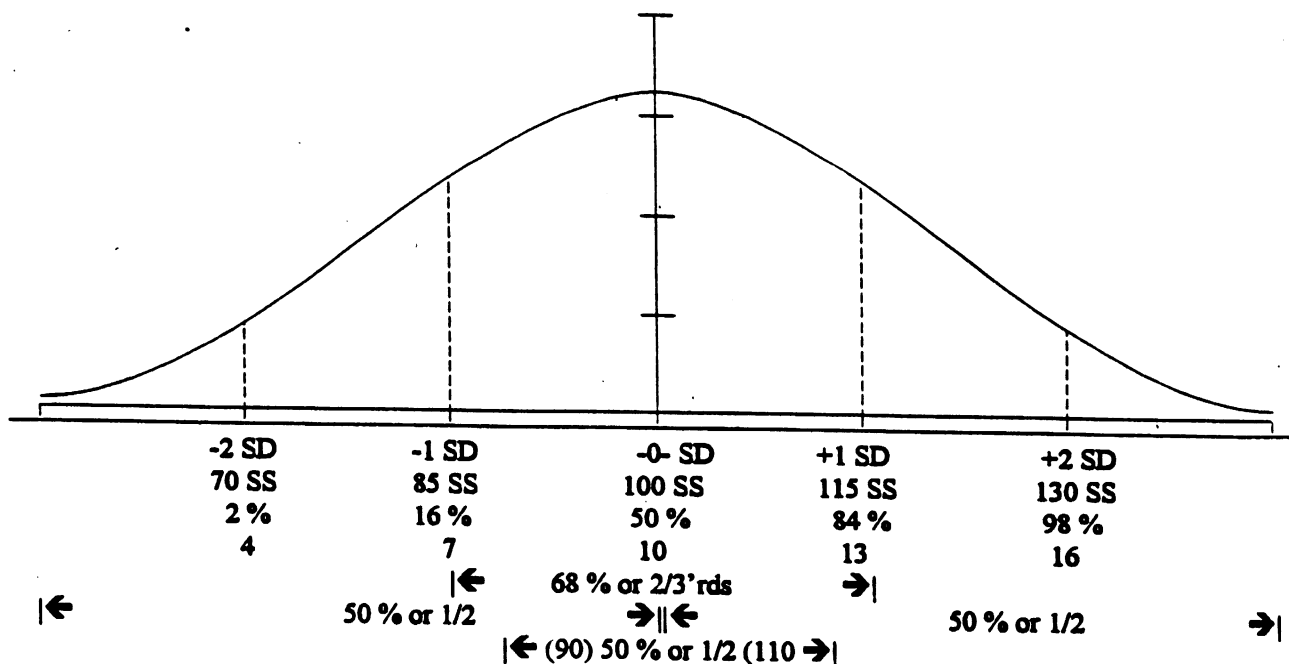


## BELL CURVE, STANDARD SCORES, STANDARD DEVIATIONS AND %'ILE RANK



A Standard Score (SS) usually has a mean of 100 and a Standard Deviation (SD) of 15. For example the Wechsler IQ tests have 100 as average. A SS of 115 is above average - exactly at the 84 percent level - which is also the same as one "Standard Deviation" above the mean! If an educational evaluation reports that the child had a written language quotient of 85. The child would be one SD below the mean, i.e. is at the 16 percent level out of 100 children the same age. Most tests use 100 as the mean and have a SD of 15. (Exa. WISC -III, Kauffman, WJ-R)

A Subtest or Scale Score is a score that represents one score used in a battery of subtests to develop a main composite" score or, in the case of IQ testing, a Verbal IQ, Performance IQ and Full Scale IQ score. In the Wechsler IQ test series, a subtest score of 10 is average and one SD is 3. Thus, plus one and minus one SD's from the mean are 13 and 7, (84% and 16% respectively).

A Percentile Rank represents the child's relative standing to other children who are the same age. If a child has an IQ of 110 (thus at the 75% level, see chart) and has obtained a written language score on the Woodcock Johnson (WJ-R) of 87 (thus at the 19% level), then the child is performing significantly below ability level and below the peer group level. You must evaluate if the percentile rank is moving closer toward both the mean of 50% and the child's ability (IQ at 75% in this example) or is the child's percentile rank continuing to drop despite a special education.

Half of all children score between 25% and 75% which is considered an "average" range and is represented by a Standard Score or IQ score of 110 and 90, and subtest scores between 12 and 8. Two thirds of all children score between plus one Standard Deviation above the mean, (i.e. a SS of 115, which is 100 plus a SD of 15), and one standard deviation below the mean, i.e. 85. On the subsequent chart, the units representing standard deviations (SD) are marked in bold. An IQ of 145 is 3 SD's above the mean and at the 99.87 percent level.

A Stanine Score is a simplified manner of reporting standard scores. Stanines range from 1 to 9, 5 is average. A few tests use "T Scores" where the mean is 50 and SD is 10.