

# A complete guide to understanding the stanford binet intelligence test essay samp...

[War](#), [Intelligence](#)



Binet defined intelligence as the capacity (1) to find and maintain a definite direction or purpose, (2) to make necessary adaptations-that is strategy adjustments -to achieve that purpose, and (3) for self-criticism so that necessary adjustments in strategy can be made.

Binet's two principles of test construction were age differentiation and general mental ability. Age differentiation refers to the fact that with increasing age, children develop their abilities. Thus, older children have greater abilities than do younger ones. Spearman developed his own theory of general mental ability, or *g*, based on the idea that a single general factor underlies all intelligence. Modern theorists have taken this concept further in *gf-gc* theory, in which there are two basic types of intelligences: fluid (*gf*) and crystallized (*gc*).

Mental age is a unit of measurement for expressing the results of intelligence tests. The concept was introduced in the second revision of the Binet scale in 1908. A subject's mental age is based on his or her performance compared with the average performance of individuals in a specific chronological age group. For example, if a 6-year-old child can perform tasks that an average 8 year old can do, then the 6-year-old child is said to have a mental age of 8.

Like mental age, the intelligence quotient (IQ) is a unit of measure for expressing the results of intelligence tests. Introduced in the Terman 1916 Stanford-Binet revision of the Binet scale, the IQ is a ratio score. Specifically, the IQ is the ratio of the subject's mental age (as determined by his or her

performance on the intelligence scale) and chronological age. This ratio is the multiplied by 100 to eliminate fractions.

The Deviation IQ, as used in the Stanford-Binet Scale, is a standard score with a mean on 100 and a standard deviation of 16.

The most recent revisions of the Binet scale, the fourth edition, was released in 1986. The modern Binet consists of 15 individual tests, each of which falls into one of four major content areas. These reflect a three-level hierarchy model of intelligence: crystallized abilities, fluid analytic abilities, and short-term memory. The modern Binet is adaptive, with each individual test according to ability. Administrators must establish a basal age and a ceiling age for each test. The reliability of the modern Binet is good. It is particularly useful for evaluating preschool children.

Categories: Ability

Purpose: An individually administered assessment of intelligence and cognitive abilities

Authors: Gale Roid, 2003, 5th Edition

Range: Age 2 to 85+ years

Administration Time: varies, approximately 5 minutes per subtest

Definition

The Stanford-Binet intelligence scale is a standardized test that assesses intelligence and cognitive abilities in children and adults aged two to 23.

### Purpose

The Stanford-Binet intelligence scale is used as a tool in school placement, in determining the presence of a learning disability or a developmental delay, and in tracking intellectual development. In addition, it is sometimes included in neuropsychological testing to assess the brain function of individuals with neurological impairments.

### Precautions

Although the Stanford-Binet was developed for children as young as two, examiners should be cautious in using the test to screen very young children for developmental delays or disabilities. The test cannot be used to diagnose mental retardation in children aged three and under, and the scoring design may not detect developmental problems in preschool-age children.

Intelligence testing requires a clinically trained examiner. The Stanford-Binet intelligence scale should be administered and interpreted by a trained professional, preferably a psychologist.

### Description

The Stanford-Binet intelligence scale is a direct descendent of the Binet-Simon scale, the first intelligence scale created in 1905 by psychologist Alfred Binet and Dr. Theophilus Simon. This revised edition, released in 1986,

was designed with a larger, more diverse, representative sample to minimize the gender and racial inequities that had been criticized in earlier versions of the test.

The Stanford-Binet scale tests intelligence across four areas: verbal reasoning, quantitative reasoning, abstract/visual reasoning, and short-term memory. The areas are covered by 15 subtests, including vocabulary, comprehension, verbal absurdities, pattern analysis, matrices, paper folding and cutting, copying, quantitative, number series, equation building, memory for sentences, memory for digits, memory for objects, and bead memory.

All test subjects take an initial vocabulary test, which along with the subject's age, determines the number and level of subtests to be administered. Total testing time is 45-90 minutes, depending on the subject's age and the number of subtests given. Raw scores are based on the number of items answered, and are converted into a standard age score corresponding to age group, similar to an IQ measure.

The 1997 Medicare reimbursement rate for psychological and neuropsychological testing, including intelligence testing, is \$58.35 an hour. Billing time typically includes test administration, scoring and interpretation, and reporting. Many insurance plans cover all or a portion of diagnostic psychological testing.

### Normal Results

The Stanford-Binet is a standardized test, meaning that norms were established during the design phase of the test by administering the test to a large, representative sample of the test population. The test has a mean, or average, standard score of 100 and a standard deviation of 16 (subtests have a mean of 50 and a standard deviation of 8). The standard deviation indicates how far above or below the norm the subject's score is. For example, an eight-year-old is assessed with the Stanford-Binet scale and achieves a standard age score of 116. The mean score of 100 is the average level at which all eight-year-olds in the representative sample performed. This child's score would be one standard deviation above that norm.

While standard age scores provide a reference point for evaluation, they represent an average of a variety of skill areas. A trained psychologist will evaluate and interpret an individual's performance on the scale's subtests to discover strengths and weaknesses and offer recommendations based upon these findings.

#### Administration

Testing begins in Item Book 1 with the routing subtests. The start points for two routing subtests in Item Book 1 are determined by age or estimated ability level; Nonverbal Fluid Reasoning routes to the appropriate difficulty level in Item Book 2 (Nonverbal), while Verbal Knowledge does so for Item Book 3 (Nonverbal). The remaining eight subtests (four nonverbal and four verbal) are then measured in Item Books 2 and 3.

FACTORSNONVERBAL (NV)VERBAL (V)

Fluid Reasoning(FR) Nonverbal Fluid ReasoningActivities: Object Series/Matrices (Routing)Verbal Fluid ReasoningActivities: Early Reasoning (2-3), Verbal Absurdities (4), Verbal Analogies (5-6)

Knowledge(KN) Nonverbal KnowledgeActivities: Procedural Knowledge (2-3), Picture Absurdities (4-6)Verbal KnowledgeActivities: Vocabulary (Routing)

Quantitative Reasoning (QR)Nonverbal Quantitative ReasoningActivities: Quantitative Reasoning (2-6)Verbal Quantitative ReasoningActivities: Quantitative Reasoning (2-6)

Visual-Spatial Processing (VS)Nonverbal Visual-Spatial ProcessingActivities: Form Board (1-2), Form Patterns (3-6)Verbal Visual-Spatial ProcessingActivities: Position and Direction (2-6)

Working Memory(WM)Nonverbal Working MemoryActivities: Delayed Response (1), Block Span (2-6)Verbal Working MemoryActivities: Memory for Sentences (2-3), Last Word (4-6)