

# What is a Stanine Score?

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## RECOMMENDED CITATION

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A Stanine score is a method of assigning a numerical value to a student's performance on a standardized test, typically ranging from 1 to 9. It is based on a nine-point scale, with 1 being the lowest and 9 being the highest. This scoring system is commonly used in educational assessments to provide a quick and easy way to interpret a student's results and compare their performance to a larger group. Stanine scores are often used to measure academic abilities in areas such as reading, writing, and math. They provide a standardized and objective way to measure a student's performance and progress.

## What is a Stanine Score? (Definition & Examples)

**A stanine score, short for "standard nine" score, is a way to scale test scores on a nine-point standard scale.**

**Using this method, we can convert every test score from the original score (i.e. 0 to 100) to a number between 1 and 9.**

**We use a simple two-step process to scale test scores to stanine scores:**

**1. Rank each test score from lowest to highest.**

**2. Give the lowest 4% of scores a stanine score of 1, the next lowest 7% of scores a stanine score of 2, and so on according to the following table:**

<b>Test Score</b>	4%	7%	12%	17%	20%	17%	12%	7%	4%
<b>Stanine</b>	1	2	3	4	5	6	7	8	9

In general, we regard test scores as follows:

**Stanines 1, 2, 3: Below average**  
**Stanines 4, 5, 6: Average**  
**Stanines 7, 8, 9: Above average**

<b>Test Score</b>	4%	7%	12%	17%	20%	17%	12%	7%	4%
<b>Stanine</b>	1	2	3	4	5	6	7	8	9

It turns out that a stanine scale has a mean of five and a standard deviation of two.

### Pros & Cons of Stanine Scores

Stanine scores offer the follow pros and cons:

**Pro:** Stanine scores allow us to gain a quick understanding of where a given test score lies relative to all other test scores.

For example, we know that a student who receives a test score in stanine 5 belongs to the middle 20% of all test scores. And we know that a student who falls in stanine 9 received a test score in the top 4% of all

**scores.**

**Con:** The drawback of using stanines is that each stanine is not equally sized and a test score in a given stanine could be closer to scores in the next stanine compared to scores within its own stanine.

For example, students who receive a score in the 40th through 60th percentile are all grouped together in stanine 5. However, a student whose test score falls in the 58th percentile would be closer to the scores received in stanine 6 compared to most of the scores received in stanine 5.

### Alternatives to Stanine Scores

**1. A percentile tells us the percentage of all scores that a given test score lies above.**

For example, a test score at the 90th percentile is higher than 90% of all test scores. A test score that falls at the 50th percentile is exactly in the middle of all test scores.

**2. A z-score tells us how many standard deviations a given score is from the mean. It is calculated as:**

$$z = (X - \mu) / \sigma$$

where:

**X** is a single raw data value  
 **$\mu$**  is the mean of the dataset  
 **$\sigma$**  is the standard deviation of the dataset

**We interpret z-scores as follows:**

**A positive z-score indicates that a test score is *above* the mean**  
**A negative z-score indicates that a test score is *below* the mean**  
**A z-score equal to zero indicates a test score that is exactly *equal* to the mean**

**The further away a z-score is from zero, the further a given test score is from the mean.**

**Both z-scores and percentiles give us a more precise idea of where certain test scores rank compared to stanine scores.**