



AMERICAN  
**mensa**  
LTD.

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## ON THE MATTER OF GENIUS

American Mensa is often considered an expert source of information on intelligence and IQ testing. The following points offer answers to some of the most frequently asked questions about IQ and genius.

### **The History of IQ**

In the early part of the 1900s, the French government commissioned a man named Alfred Binet to devise a test that would enable school authorities to determine which students “could but wouldn’t” achieve academic success and which students had true difficulties in the classroom. The model Binet used was an abilities test comparing the levels of the average student for a particular age group. The basic formula was the abilities measured for a given student divided by the average abilities for that age group multiplied by 100. Thus, if a student were achieving at the same level as his or her age group, the “Intelligence Quotient,” or IQ, would be 100.

In the 1920s, Lewis Terman applied these methods for California schools, developing the Stanford-Binet IQ test. (Terman was a professor at Stanford at that time.) During that period, tests were constructed for each level, going up to age 16. As World War II began, there was a furor of interest in ability testing as Army pilots were being tested for potential flight schools. Many forms of ability testing were created, however, the model of using a quotient of developmental skills for adults didn’t work because abilities are not cumulative.

In 1939, David Wechsler pioneered new testing procedures using a statistical model of ability ranges and variance. This model is what we use today. It is an averaging approach in which 100 is considered to be the average score. Scores are calculated as to how they rank with other scores, indicating how many people score at or below the result of the individual. For example, if a person scored 100, that score would be ranked as being at or more than 50 percent of the other people’s scores since that score is calculated to be at the 50 percentile. A score of 98 percentile means that the person scored at or above 98 percent of the other people. The IQ is correlated to the percentile based on the overall range and distribution of the test scores.

In all current tests of intellectual abilities, the scores are represented in terms of how much a score deviates from the average. This may be represented in different ways. For example, in one test, the IQ score of 130 is the same as the 98<sup>th</sup> percentile or two standard deviations from the average. In another test, a score of 140 represents the same percentile rank. It all has to do with the way the test was constructed. But the interesting fact is that the term “IQ” has taken on a new meaning. It is no longer a true quotient, but rather a statistic. Mensa accepts a number of tests, but always considers the percentile score, not the IQ.

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***The High IQ Society***

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## **What is a genius?**

It has been said that an IQ of 140 means you are a genius; however, there is no such definition in psychological testing. There are also no reputable test publishers that would use an IQ score to classify someone in that category. The 140 IQ is probably a misunderstanding that dates back to when Terman conducted longitudinal research with several students with IQs above 140 (the test used at that time). From subsequent reporting about the study, the magic figure of IQ 140 came into play. The IQs of some well-known individuals have been given the label of “genius.” One book claimed IQs of 180 and 200 for Alexander Pope and Charles Darwin. However, this is unlikely since they died long before the first intelligence test was produced. There are some individuals that probably are geniuses in the sense that they have superior intelligence, such as Einstein and Edison. Interestingly, testing reveals that highly creative people often do poorly on standardized tests because they use their test time thinking of broader applications to simple questions. For example, both Edison and Einstein were failures in public schools and did poorly on exams.

## **How can different tests qualify for Mensa membership?**

Mensa is interested in people who have a high intellectual ability, and there is more than one area of intellectual aptitude. Some people are very smart in mathematical concepts, some are smart in language and vocabulary, and some are very smart in spatial puzzles. Some tests overlap in terms of intellectual spheres, and we are learning all the time about unique and specialized abilities. Rather than define intelligence for all spheres, Mensa accepts a score at the 98<sup>th</sup> percentile on reputable abilities tests, allowing the test to define intellectual capacities. Tests are accepted if they are reliable, valid and accepted by the American Psychological Association. Mensa accepts over 200 different tests.

## **Are there really any true geniuses?**

As “genius” cannot be measured, it is not a term relevant to Mensa consideration. “Genius” can be used in a broader sense, though, to describe highly intelligent people. Nobel prize winners are obviously brilliant thinkers and creators at a superior level, but whether their abilities could be measured with a standardized test is a mystery.

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