The book, “How to lie with statistics”, talks about many examples of misused statistics. Among them, there is an IQ test example. Suppose A got 98 score, and B got 104 score on IQ test. We tend to think that B has a higher IQ and that A has a little bit lower IQ than *normal* people. Because, many people think that 100 score is normal.

The author, however, pointed out that it is hard to say that B is smarter than A. It is because of not only ambiguousness of the definition of IQ. But also, the score can be changing every test depending on situations or conditions. In a word, there exists an error range. If IQ test’s error range is 4, A’s IQ can be 102 and B’s IQ can be 100. In this case, the order of the score would be changing totally.

Therefore, the information has to be provided with the range. We should check that the difference between values is within error range. In addition to error range, there is also a range of normal in IQ test. *Normal* is not 100, but the range of 90 to 110. So, we cannot even say that B is smarter than A. They are all in normal range.

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