

## Re: margin of error of mean from 3-valued (0,100,200) multiple-choice survey question

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*Source:* <http://sci.tech-archive.net/Archive/sci.stat.math/2008-01/msg00024.html>

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Hi Gus – thanks for the reply! Yes, I have access to individual coded responses. Here's two typical samples:

200 38.0%  
100 47.0%  
0 15.0%  
sample size: 1000  
mean: 123  
standard deviation: 69

200 33.0%  
100 50.0%  
0 17.0%  
sample size: 500  
mean: 116  
standard deviation: 69

Given the samples above, what would be the best formula to compute:

- margin of error, with 95% confidence, for each mean?
- whether the difference between the two represents a statistically significant change (at 95% confidence) ?

Some follow-up questions:

- does it matter that there are only three choices— is standard deviation meaningful in this case?
  - does it matter that the distribution is not evenly distributed on both ends, because there are usually more 200's than 0's?
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