Bonus Confidence Intervals

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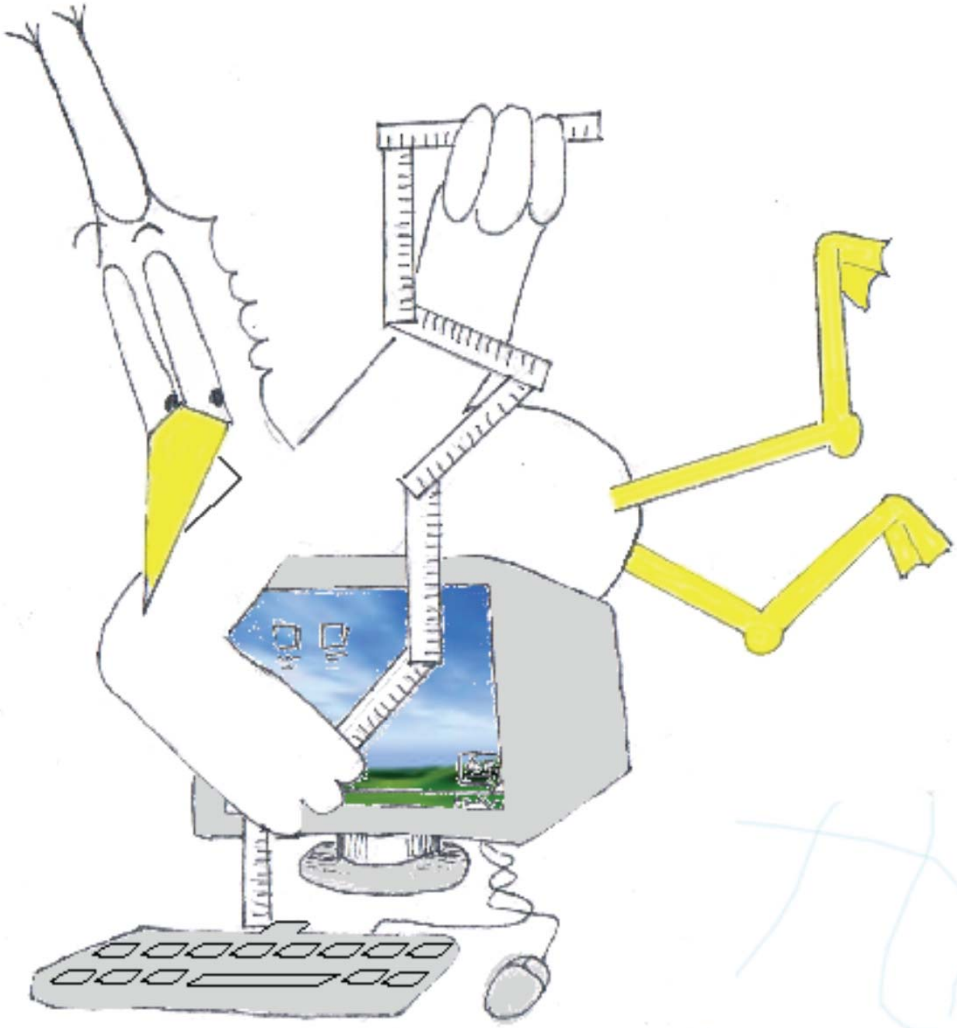
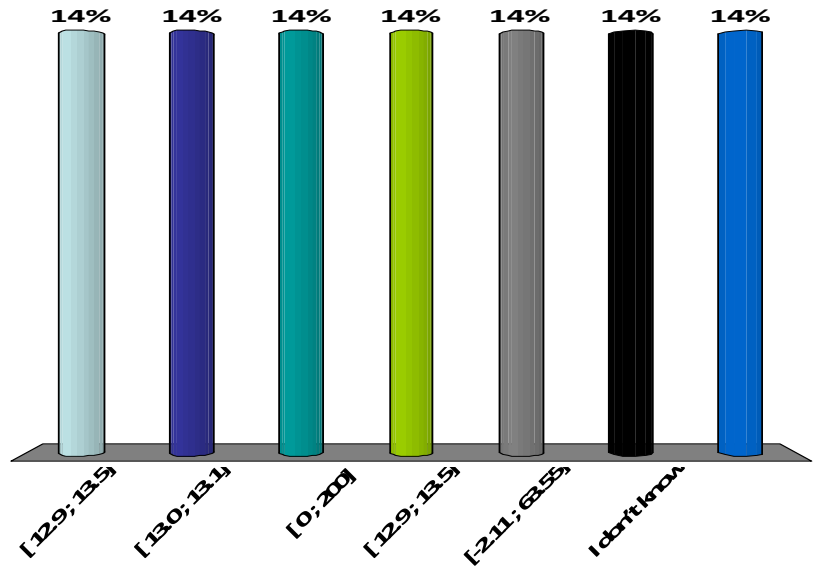


Here are the results of 10 independent simulation runs (throughput in Mb/s).

13.3
12.9
13.1
13.5
12.8
12.9
13.2
189.6
12.9
13.0

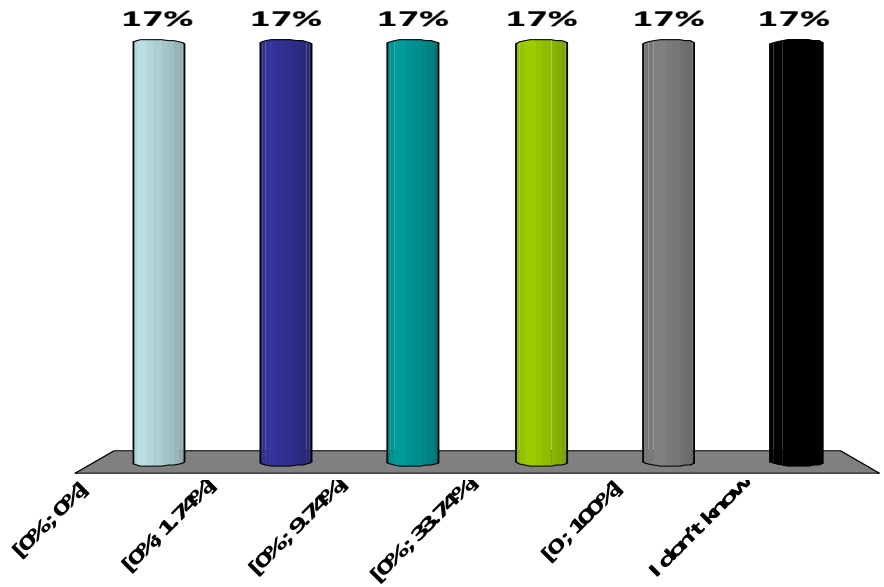
Give a 95% confidence interval.

A. [12.9 ; 189.6]
B. [12.9 ; 13.5]
C. [13.0 ; 13.1]
D. [0 ; 200]
E. [12.9 ; 63.55]
F. [-2.11 ; 63.55]
G. I don't know



We have tested a system for errors and found 0 error in 36 runs. Give a confidence interval for the probability of failure

A. [0% ; 0%]
B. [0%; 1.74%]
C. [0% ; 9.74%]
D. [0% ; 33.74%]
E. [0 ; 100%]
F. I don't know



We do $n = 100$ experiments and compute a 95%-confidence interval $[L, U]$ for the median. We find $L = 7.4$ and $U = 8.3$. Which statement is correct.

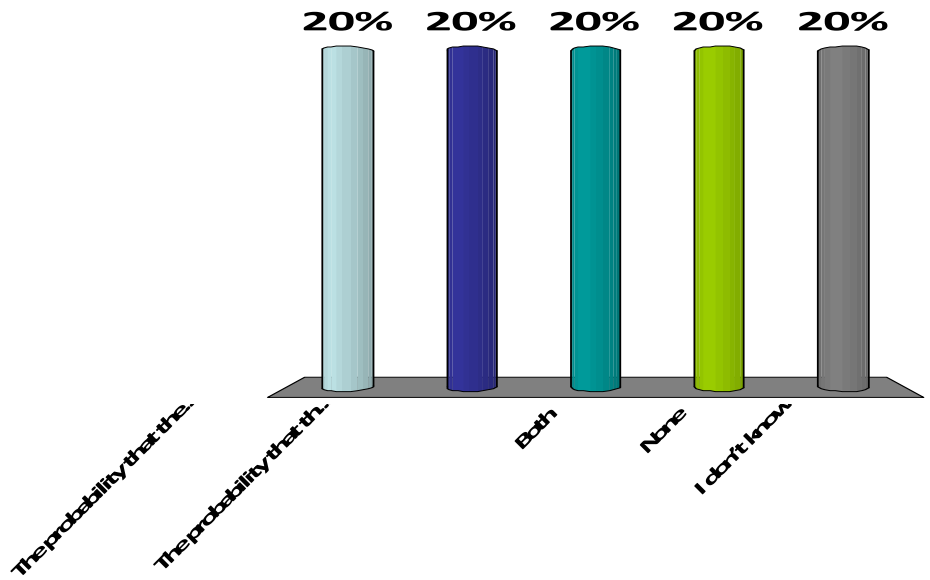
A. The probability that the median is in L ;U is at least 95%

B. The probability that the median is in [7.4 ; 8.3] is at least 95%

C. Both

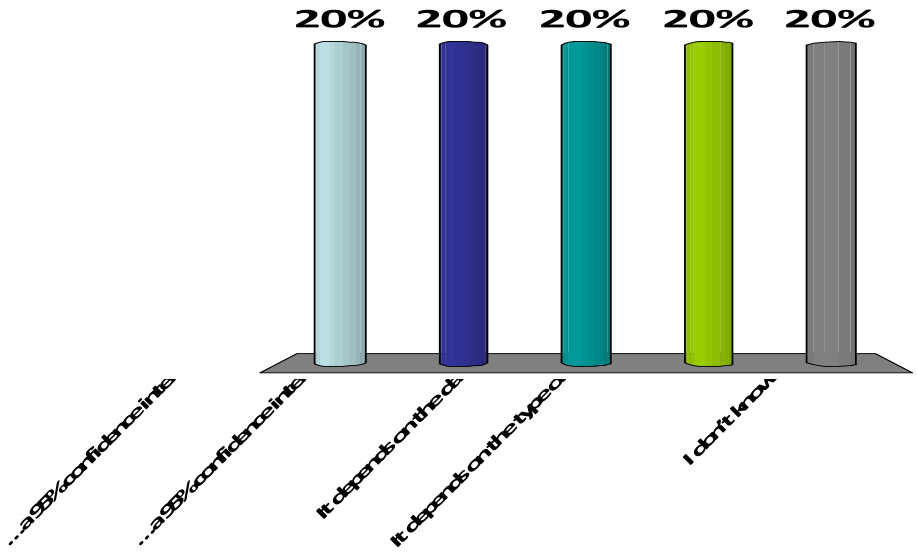
D. None

E. I don't know



We expect…

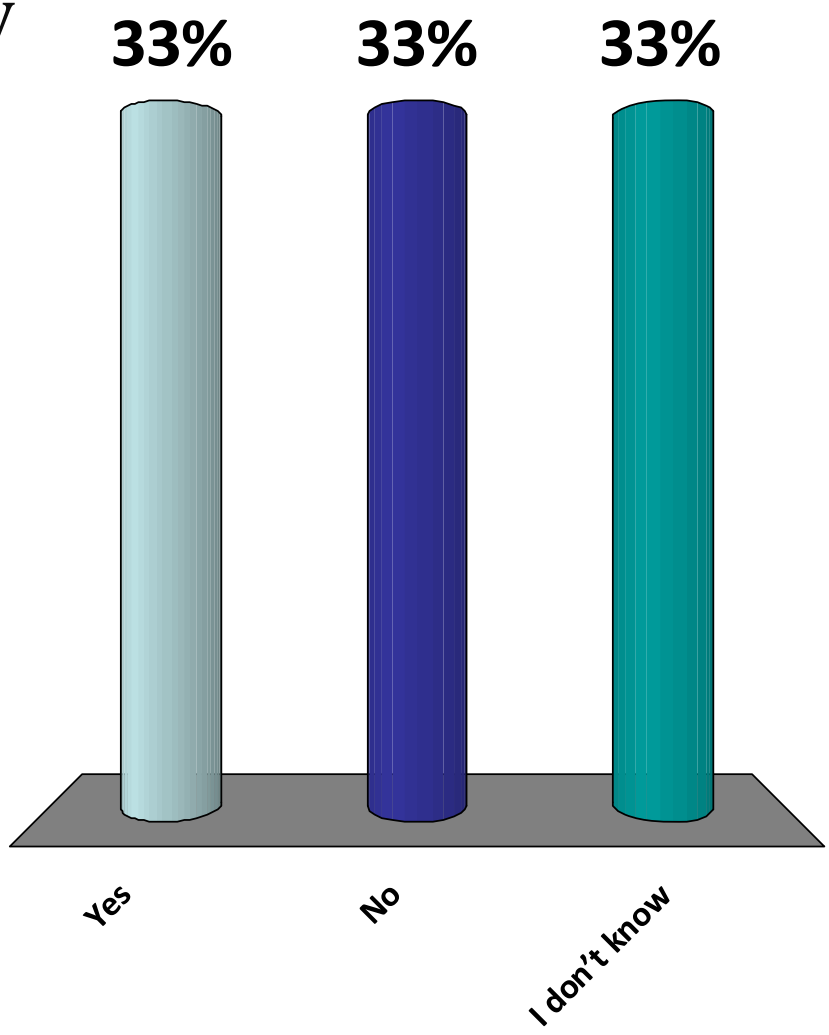
A. … a 95% confidence interval to be narrower than a 99% confidence interval
B. … a 95% confidence interval to be wider than a 99% confidence interval
C. It depends on the data
D. It depends on the type of confidence interval
E. I don't know



A data set $x_i > 0$ is such that $y_i = 1/x_i$ looks normal. A 95% confidence interval for the mean of y_i is $[L; U]$.

Is it true that a confidence interval for the mean of x_i is $\left[\frac{1}{U}; \frac{1}{L}\right]$?

A. Yes
B. No
C. I don't know



A data set $x_i > 0$ is such that $y_i = 1/x_i$ looks normal. A 95% confidence interval for the median of y_i is $[L\,;U]$.

Is it true that a confidence interval for the median of x_i is $\left[\frac{1}{U}\,;\frac{1}{L}\right]$?

A. Yes
B. No
C. I don't know