Rule of 5

ptf

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The rule of 5 states that the median of a distribution will be located between the min and max of 5 samples most of the time. What is the actual percentage? What about the mean?

sim\_results <- function(n, f) {  
 d <- matrix(f(n\*5), nrow = 5)  
 lbound <- apply(d, 2, min)  
 ubound <- apply(d, 2, max)  
 sum(lbound < 0 & ubound > 0)/n   
}  
  
sim\_results(1e5, rnorm)

## [1] 0.93866