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# This script computes 95% confidence intervals for ranks.
# Supply ranked mean values, their standard deviation and names.
mean <- c(31,32,33,34,35,36)             # The mean ranked as 1 first.
sd <- c(1,2,3,4,5,6)                     # Standard deviations.
name <- c("H1","H2","H3","H4","H5","H6") # The names
dat <- data.frame(mean,sd,name)
nbr.sim <- 5000 # number of cycles
n_klin <- length(dat[,1])
klin <- data.frame(dat$name,matrix(NA,nrow=n_klin,ncol=2))
names(klin) <- c("Names","lo","up")
sim.mat <- matrix(NA,nrow=n_klin,ncol=nbr.sim)
for (i in 1:n_klin) {
 sim.mat[i,] <- rnorm(nbr.sim,dat$mean[i],dat$sd[i])
}
rank.klin <- function(x,o.nbr){return(which(order(x)==o.nbr))}
rank.mat <- matrix(NA,nrow=n_klin,ncol=nbr.sim)
for (i in 1:n_klin) {
 for (j in 1:nbr.sim) {
  rank.mat[i,j] <- which(order(sim.mat[,j])==i)
 }
}
qunt <- function(x) { return(quantile(x,prob=c(0.025,0.975)))}
res <- t(apply(rank.mat,1,qunt))
cbind(dat,res)
```