Given: = 97, sx = 16, nx = 64, = 90, sY = 18, nY = 81; assume the samples are independent. Construct a confidence interval of μX – μY  according to (a) C = .95 and (b) C = .99

Here are some notes:

Rule for constructing a confidence interval for μX – μY  when σx and σy are unknown

(

tp is the magnitude of t for which the probability is p of obtaining a value so deviant or more so (in either direction)

p = (1 – C) where C is the confidence coefficient

is the estimate of the standard error of the difference between two means

d is the difference between ( and the outer limits of the interval estimate, expressed in terms of the number of standard deviations of the variable

is the average of sx and sy ( which is reasonable satisfactory if nx and ny are approximately the same size)