

Leading up to Ranchos' 2014 CIF Championship football game with Garden Grove, Coach Enright was trying to estimate the true number of tickets needed for pre-sale at the Rancho bookstore. Pre-sale ticket totals were found from 21 other high schools that played in CIF Championship games from past years, they are listed below.

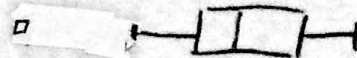
765	821	458	827	890	653	734
812	776	715	883	873	750	801
654	771	749	723	834	749	721

a) Construct and interpret a 99% confidence interval to help Coach Enright in estimating the number of tickets needed for pre-sale at Rancho.

99% \pm interval for means

We have an independent random sample of 21 pre-sale ticket totals for CIF Championship game. It is safe to assume that there have been at least 210 pre-sales similar to these. Our boxplot shows an outlier... normal condition is Not met

PROCEED WITH CAUTION



(700.54, 819.4)

I am 99% confident that the true mean # of tickets sold for pre-sales is between 700.5 & 819.4 because I used a method that captures the true mean in about 99 out of 100 attempts in repeated sampling.

b) After the actual pre-sale was completed, 930 tickets were sold at the Rancho bookstore. Based on the results from the confidence interval in part a), what can you say about the pre-sale ticket results for the Rancho/Grove game?

Since 930 is larger than our confidence interval estimate, there is some evidence that this game may have a large crowd.