Plastic Grocery Bags

Do plastic bags from Target or plastic bags from Publix hold more weight? A group of AP Statistic students decided to investigate by filling a random sample of 5 bags from each store with common grocery items until the bags ripped. Then they weighed the contents of items in each bag to determine its capacity. Here are their results, in grams:

Target:	**12,572**	**13,999**	**11,215**	**15,447**	**10,896**
Publix:	**9552**	**10,896**	**6983**	**8767**	**9972**

Construct and interpret a 99% confidence interval for the difference in mean capacity of plastic grocery bags from Target and Publix. Does your interval provide convincing evidence that there is a difference in the mean capacity among the two stores?

The stronger picker-upper?

In commercials for Bounty paper towels, the manufacturer claims that they are the "quicker picker-upper." But are they also the stronger picker upper? Two AP Statistics students, decided to find out. They selected a random sample of 30 Bounty paper towels and a random sample of 30 generic paper towels and measured their strength when wet. To do this, they uniformly soaked each paper towel with 4 ounces of water, held two opposite edges of the paper towel, and counted how many quarters each paper towel could hold until ripping, alternating brands. Here are their results:

Bounty: 106, 111, 106, 120, 103, 112, 115, 125, 116, 120, 126, 125, 116, 117, 114

118, 126, 120, 115, 116, 121, 113, 111, 128, 124, 125, 127, 123, 115, 114

Generic: 77, 103, 89, 79, 88, 86, 100, 90, 81, 84, 84, 96, 87, 79, 90

86, 88, 81, 91, 94, 90, 89, 85, 83, 89, 84, 90, 100, 94, 87

(a) Display these distributions using parallel boxplots and briefly compare these distributions. Based only on the boxplots, discuss whether or not you think the mean for Bounty is significantly higher than the mean for generic.

(b) Use a significance test to determine if there is convincing evidence that wet Bounty paper towels can hold more weight, on average, than wet generic paper towels.