

Section 10.5 — Example

Problem: (Parts of exercise 10.38) The annual 2006-2007 auto insurance premiums for a single male, licensed for 6-8 years, and who drives a Honda Accord 12,600 to 15,000 miles per year and has no violations or accidents is given in the following table:

City	Allstate	21st Century
Long Beach	\$2617	\$2228
Pomona	2305	2098
San Bernardino	2286	2064
Moreno Valley	2247	1890

1. Why does it make sense to use a paired test for testing the difference in means for this data?
2. Do the data provide sufficient evidence to indicate that there is a difference in the average annual premiums between Allstate and 21st Century insurance? Test using $\alpha = .01$.
3. Find a 90% confidence interval for the difference in the average annual premiums for Allstate and 21st Century insurance.