

Warm-up:

- Find the P-value for the hypothesis test with the standardized test statistic z . Decide whether to reject H_0 for the level of significance α .
 - two-tailed test, $z = 1.95$, $\alpha = 0.05$
 - right-tailed test, $z = 2.13$, $\alpha = 0.01$
- Find the critical value and rejection region for the type of z-test with level of significance α .
 - Left-tailed test, $\alpha = 0.01$
 - two-tailed test, $\alpha = 0.08$
- A local politician, running for reelection, claims that the mean prison time for car thieves is less than the required 6 years. A sample of 80 convicted car thieves was randomly selected, and the mean length of prison time was found to be 5 years and 9 months (5.75 years), with a population standard deviation of 1 year and 3 months (1.25 years). At $\alpha = 0.05$, test the politician's claim. Use either P-values or rejection regions. Show all work (including stating the hypotheses, a sketch, etc.).