Inference Tests

Instructor: Mr. Thompson

1. "One death is a tragedy. One million deaths is a statistic" — Such were the words of the General Secretary of the Communist Party of the Soviet Union Iossef Vissarionovich Dzugashvilli. Minister of Internal Affairs Lavrentiy Beria suspects Soviet losses exceeded those of other allied countries. A simple random sample of 5 allied countries produces the result: $\bar{x} = 851,760$ losses and $S_{\bar{x}} = 1,022,222$ losses. Soviet casualties are estimated at $\bar{x} = 23,500,000$ and $S_{\bar{x}} = 3,500,000$ losses. The population distributions of allied and Soviet losses are normally distributed.

   (a) Determine whether there is a significant difference in losses between Soviets and other allies at the $\alpha = .05$ level.

   (b) Would a 95% confidence interval contain the true difference in means of the different casualties?