	Hypothesis Testing			
	Question			
	1. Increasing medical costs have created a financial crisis among insurance companies that provide medical benefits programs to major corporations. In an attempt to measure the cost of medical benefits to its employees, the personal manager of a California-based manufacturing company randomly surveyed the records of n=64 employees and recorded the medical insurance claims by each chosen employee for the previous 12 months. The result of this survey revealed an average total claim of $964 with standard deviation of $147.			
	a. Estimate the average annual medical claim per employee and place a 95% bound on the error of estimation			
	b. The insurance carrier for the California-based manufacturing company has informed corporate officials that coverage will be continued only if it can be shown that the average employee claim does not exceed $900. Based on the above information what do you conclude? Test by using significance level = 0.05.			

a.	**Estimating the average annual medical claim per employee at 95% confidence level.**			
	Stdev	$147	Standard error = Standard Deviation of sample (stdev) / √ (Sample size (n))	
	Mean	$964		
	n	64		
			Margin of error = Critical value x Standard error	
	Standard error	$18.38		
	Critical value	1.96		
	Margin of error	$36.01		
	Upper Limit	$1,000.01		
	Lower Limit	$927.99		
	Confidence intervals	$927.99	–	$1,000.01
	The average annual medical claim at 95% confidence level ranged from $927.99 to $1000.01			
b.	**Null Hypothesis = The average annual medical claim per employee is less than or equal to $900 ($\mu \le$ $900.)**			
	The lower limit would be $927.99 at 0.05 significance level. This lower limit exceeds $900, which means that the lower limit of an average annual medical claim exceeds the maximum threshold that the insurance carrier set. The *p*-value is lower than the significance level, which means that there is sufficient evidence to prove that the average employee claim exceeds $900. Thus, the insurance carrier will opt to discontinue the coverage for the company.			