**Use n=25 for each problem where necessary.**

1. An accountant randomly selects (60+n) general accounts payable and examines them to

 determine whether they are correct. Six accounts contained errors. Construct a 98% confidence interval for the true proportion of general accounts payable that contain errors.

1. Compute 95% confidence interval to estimate for the population mean $μ$, if the sample mean $\overbar{x}$ = 7.4+n , standard deviation $σ$ =16 , and n = 100.
2. Suppose that we want to conduct a poll to estimate the proportion of voters who favor an issue. Assume that 50% of the voters could be in favor of the issue. Find the sample size needed so that we are 99% confidence that the sample proportion of voters who favor the issue is within (0.03+0.01n) of p, the true proportion of all favorers who are in favor of the issue.
3. Consider a population having a standard deviation equal to 10. We wish to estimate the mean of this population. How large a random sample is needed to make us 90% confident that the sample mean of this population within (3+0.05n) of the true mean.

 **Use the 5 step procedure for each**.

1. Suppose that a random sample of 16 measurements from a normally distributed population gives a sample mean of $\overbar{x}$ = (13.5+0.03n) and sample standard deviation s = 6. Test the claim that the mean of all measurements $μ $ is greater than 10. That is test the hypothesis H0 : $μ$ <10 versus H1:$μ$ > 10. Use α= 0.10.
2. Test the claim that a population mean equals (70+0.04n). You have a sample of 49 items for which the sample mean is 69, and the standard deviation $σ$ = 5. Use α= 0.05.

1. In a Roper Organization poll of 2000 adults, 1400 have money in regular savings

 Accounts. Use this sample data to test the claim that less than( 65- 0.02n)% of all adults have money in regular savings account. Use α= 0.01

1. Test the claim that$μ\_{1}=μ\_{2}$. In the case, the two samples are independent and are randomly selected from populations with normal distributions. Use the data:

 *Production Method A* *Production Method B*

 n1 = 20 n2 = 25

 $\overbar{x}$1 = 125 +n $\overbar{x}$2 = 110 +n

 s1 = 15 s2 = 13. Use α = 0.05

5. Suppose that we have selected two independent random samples from two populations having proportions p1 and p2 and that $\hat{p\_{1}}$ = 800/1000 = 0.8 and $\hat{p\_{2}}$ = 950/1000 = 0.95, test the claim that the population proportions are not equal.. Use α= 0.05 .

 6. Test the hypothesis given in Problem **10.29** part **b.** Use α= 0.05+0.001n.

P 10.29 part b

Suppose a sample of 11 paired differences that has been randomly selected from a normally distributed population of paired differences yields a sample mean of *d*=103.5 and a sample standard deviation of *sd*= 5.

Part B

Test the null hypothesis Ho:(mu)d> 100 by setting up α(alpha) equal to .05and .01.

How much evidence is there that µd =µ1-µ2 exceeds 100