4. At  α = 0.05 and 0.10, test the hypothesis that the proportion of Consumer (CON) industry companies winter quarter profit growth is more than 1percentage point greater than the proportion of Banking (BKG) companies winter quarter profit growth, given that  p CON = 0.20,  p BKG = 0.14, *n*CON = 350, *n*BKG*=*400.

P1 = 0.20, Pbkg = 0.14, nCON = n1 nBKG = n2 ??????

5. The mid-distance running coach, Zdravko Popovich, for the Olympic team of an eastern European country claims that his six-month training program significantly reduces the average time to complete a 1500-meter run. Five mid-distance runners were randomly selected before they were trained with coach Popovich's six-month training program and their completion time of 1500-meter run was recorded (in minutes). After six months of training under coach Popovich, the same five runners' 1500 meter run time was recorded again the results are given below.
  
At an alpha level of .01, can we conclude that there has been a significant decrease in the mean
time per mile?

Let D1 = (Time before)-(Time after)

Ho:ud less than 0, Ha:ud greater than 0

t4.01 ????

d with cross bar = .1+.4 + (-.1) + .3 +.3

divided by 1?

Standard deviation = \_\_\_\_\_\_\_\_

Standard deviation divided by square root of 1?

t = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_???

6. Test H0: μ1 **=** μ2; H1: μ1 **≠** μ2 at α = 0.05 and 0.01, when $\overbar{X}$1 = 75.6, $\overbar{X}$2 = 72, s1 = 3.3, s2 = 2.1, n1 = 6, and n2 = 6. Assume equal variances. Indicate which test you are performing; show the hypotheses, the test statistic and the critical values and mention whether one-tailed or two-tailed.