STATSIS Homework#4 - Mathew Houser (df) (s)² 2·(3)·(00.13)² 2 M (H)= M: off (0) X=/2 7.814.73 > 5.0065 northogon 8.57 7.110 We are 190% confident that the true Variation in pertide scores is between 0.0065 and 201441.11=M:0H 11=M:0H 8,6 Ho: M= 5.5 days 2+ Ha: M 5+5. 5 days not sisy 8.10 Ho: M = 8 se conds - Ha: M + 8 seconds - x = 3 8.12 (a) Ho! M=4.7 Ha! M>4.7 0.8 Alle 8.38 (b) +Zz=x=14,9854177 1+2+77629+ 91T Level son thore solvest 1258) som the noise there is insufficient (esobose) to establish is event (d) The calculated 2-score fulls within the rejection 8F.8 region, therefore at the oc= 6.05 significance level; there is sufficient evidence to conclude that the mean student driver response 5-months after a safe-driver presentations is greater than 4.7 The colculated 3-score doeseth: fall within this office on 04.8 (6) 026 2 do 6 4516 (do: 0:05) of the end ment noise 20.0 (c) Zert 来此处 of 子3.50元1+1年33795在82 yent 5/17:0= 20 6/3900 <9 1.0H 20.0=9:0H (d) (d) The calculated 2-score falls within the reject? region, there fore at the desois significance level, there is sufficient evidence to conclude that the mean resting heart rate during laughter mont Exceeds 71 beats perminuteive trainffue 21

STATSIS Homewoods HA - Mathew Howser (a) Ho! M=6 Ha! M < 6 (81. 00=0.05 (2) (9b)

Rejection Region: Lc < -2.132= 011.F 8.57 te= x-M 14.8-6 = (-12.0641. - (2) (36) The test statistic falls outside of the rejection region there fore at the actions significance level, there is insufficient evidence to conclude that M < 6. Ho: M=11 Ha: M +11 / 00 40,05 bas 2000.0 8.61 Rejection Region Fter 2.2445 2006 2.2=4:0H 01.8 to = x-16001087-11: -H-01322278 = M:0H 51.0 5/5n 3.6/515 KM : oH F. + = M: of (0) The testo statistic falls outside of the rejection region, therefore at the a:0,05 significance level, there is insufficient evidence to conclude that the Ment Mean Dental Anxiety Scale - Score differs from MEII. 8.78 (a) Ho: P=0,652 Ha: P>0.65 + a=0,01 at noise Rejection Region: Zo 72,33 ye thousand of month 120= (PORO) = 0,74-0.65 = 1 =11.18869 word F. + 100 Pogo/100 V(0,65)(0,35)/100 Jours - Aug The calculated z-score does not fall within the rejection of 8 region, therefore at the accord significance level () there is insufficient evidence to conclude that po 0.65 (b) Ho! P=0.65 Ha! P>0.65 Da=0.10 Rejection Region: 1/20701028 betalials out (b) Zc=1.8869 (see part a) to not nort no 197 The cat culated 2 value fulls in the rejection region, there fore at the ac= 0.10 significance level, there is sufficient evidence to conclude that P7 0,65.

:. Test results will (c) n-p.= 0.90-100 = 90 ≥ 15 V be invalid. n. qo = 0.10.100 = 10 Z 15 X 8.80 (a) p = 506/755 = 0.67 (b) Ho! P=0.7 Ha: P70.7 $\frac{Z_{c} = \hat{p} - P_{o}}{\sqrt{P_{o} q_{o} / n}} = \frac{0.67 - 0.7}{\sqrt{(o.7)(o.3)/755}} = -1.799$ (d) Zc72.33 (x:0.01) (e) P(z>-1.799)=0.964 (f) The calculated z-value does not fall in the reject region, therefore at the a= 0.01 significance level, there is insufficient evidence to conclude that p70,7, (g) The calculated p-value is >0.01, therefore at the a=0.01 significance level, there is insufficient evidence to conclude that pro.7.