9.43 a) Ho: H= 3 H1: M = 3 < 0.05 6 a 1 45 8.09 = 9. 7=15 X = 2.78 8 = 0.9 Z0.05 = 1.645 a jarya off $z_0 = 2.78 \cdot 2 - 3 = -0.22$ = -0.967 (lies in 0.2323 -1.645) We do not right Ho. - 39 % b) $\mu = 3.25$ $\beta = \phi \left[20.025 + \frac{3-3.25}{0.91\sqrt{15}} \right] - \phi \left[-20.025 + \frac{3-3.85}{0.9} \right]$ $\phi = 2 \left[1 - \phi | 201 \right] = 2 \left(1 - \left(-0.942 \right) \right) - 2 \left(1.942 \right) \sqrt{15}$ = 0[1.96-1.075)-0(-1.96-1.075)=0.81057-0.001213 = 0.8098 POWM= 1-0.8098 = 0.1902 c) B=1-0-9=107 -1 = (05)0-10 true mean= 3.75 $Z_{4/2} = 1.96$ $Z_{B} = 1.28$ $\eta = \left(\frac{Z_{4/2} + Z_{B}}{4 + Z_{B}}\right) \left(0.9\right)^{2} = \left(3.2\psi\right) \left(0.81\right) = 15.11$ (3.75-3)2 (0.75)2 5000.0 m (14.8-14.2) 72 15 (01 05 1 20 05) = 3 (8 stxs) 10

6 = 1.25 9.45 I the way to the fact of 2 10 X = 40.5 a) K=0.05 Ho: M=400 => 20= x-M - 1 4 15 to 1 MES Riject Ho if 20>2 where 20.05=1.65 x=40.5 20=40.5-40 = 0.5 =1.282 (Since 1.282 < 1.65 gwe do not E-5100 0- P-0130 = (840-1-08 1-) p- (860-1-08-17) = b) P-value = 2 POB :0 -1 = N nog 2 POB 0 = =1- 0(20) = 1-0.8997 0109 (0 = 0.1003 = \$ (1.65 + (-5.06)) $\beta = \phi \left(\frac{20.05}{1.25} + \frac{40 - 42}{1.25} \right)$ = p(-3.61) ~ 0.0003 $n = \frac{(2x+2\beta)^2 6^2}{6^2} = \frac{(2065 + 20.10)^2 6^2}{(40-44)^2}$

	$= (1.65 + 1.29)^{2} (1.25)^{2} = 0.849$					
the same of	42					
	E)					
	95/ CI					
	x + 20.05 6 5 M					
	7 29 - 13 Sp					
	60.5 + 1.65 / 1.25 \ ≤ 11 => 1.1.152 ≤ 11					
	60.2 + 1.62 (1.52) = h= H1.125 = h					
	The lower bound must be greater than 40					
	The lower bound must be greater than 40 to verify that the true mean exceeds 40hors.					
	20 mg to 10					
9.88	n=15					
	S= 0.008					
	2= 0:0100x Ation with 20:100					
7.6	a) Parameter of interest : Population Standard					
(5-10)	deviation of					
	Ho: 8 = 0.01					
Paggiorian Malamandia (1995)	41: 670.01					
	$\chi_0^2 = \frac{(n-1)s^2}{6^2} = \frac{(15-1)^2(0.008)^2}{(0.01)^2} = 8.96$					
	$\chi_0 = \frac{(n-1)^2}{(n-1)^2} = \frac{(15-1)(0.008)}{(0.008)} = 8.96$					
98.	10.01)2 die 62 5 205 (0.01)2					
	Chibical orgion: 20 > 22 => 20.01,16=29.					
	17					
	Maria Ho is soughed					
	but 8.96 < 29.16, hence, Ho is rejected.					

Degrees of yncidom = n-1=16 N 0.94= 7.79 0.9,10 20.5,16 = 13.36 7.79 < 8.96 < 13.34 0.5 < p-value < 0.9 9.98 Ho: p=0.5 M.: P\$0.5 Test is 2-sided with 2=0.05 tust statistic , 20= x-np = 117-485 (0.5) Jnp. (1-90) - (484) (0.5) (0.5) = -11.36 Critical origion: 20 >242 20c-Zx/2 with Z0.025=1.96 2671.96 on 22-1.96, 70=-11.36 Hunce Ho is rejected. P-value = P(z > 1201) = 2 p(20) = 2 P(-1136) = 2(0)=0

95.1. CI is p= 20.025 \p(1-p)/n = 0.247 ± 1.96 \ (0.2417) (1-0.2617)/985 = (0.2036,0.2798) Po=0.5 is not included in this C-I. Hence, we have enough evidence that thre population is different from 0.5. n=500) = 4× 5 = 9.103 x= 466 p: x 1466 0 2 0 932 0 100 1 Ho: Pro9 Ho: P70.9 ENXIEL = 10 X/E $Z_0: P-P^{-1} = 0.932 - 0.9 = 2.385$ $\sqrt{P_0(1-P_0)/n} = \sqrt{0.9(0.1)/500}$ P-Vall = P(Z 72.385) = 1- \$ (2.385) = 0.0009 There is sufficient apprecidence that nate is alleast 90%.

Ho: Sample of thees & time periods are independent 9-113 41: Sample of their of time periods are not independent. 2=0.005 Pox statistic => Xo = Z Z Coij-Gij)

Fii Experted frequency: $Eij = \frac{1}{n} \quad \stackrel{\text{Z}}{=} 0ij \stackrel{\text{Z}}{=} 0ij$ 4 = (7-1)(c-1) = (3-1)(3-1) $= 2 \times 2 = 4$ degrees of freedom 2 20.05, p = 9.4877 If calculated test statistic is grunter than 9.8877, we niget 40. $E_{11} = \frac{91 \times C1}{9} = \frac{131 \times 133}{387} = 45.02$ $621 = 91 \times C2 = 133 \times 92 = 31.62$ $631 = 91 \times C3 = 133 \times 164 = 56.36$ $631 = 91 \times C3 = 133 \times 164 = 56.36$ Allen in

E12 =	114×131 :	3859	Not the N		en et en er en
E223	114×92 387	= 29.10	in topic	4.0	
E32=	114×164 387	= 48.310	8 pg -q > §		
	140×131 387				ale again agus leath an meantair shoù a hair ann agus an dhair agus an t-air ag le a hair an an agus ag le an t-air ag le an t-air ag le an
52 =	146×92 =	\$3.29			
The state of the s	140×164 =	the last in the last of the la			
Епри	ted value	<i>አ</i> :			
		Species	р.		Total
yen		Penn.	Rub	Secc	
	1936	45.02	31.62	56.36	133
	1972	3 8 59	27.10	48.31	114
	2011	47.39	33.28 59.331	59 . 33	140
			92.00		7.0-
Exput	d Total	131.00	1600	164.0	0 387
	是是 (0)	j-6j) Gi	= =====================================	(00-60)	
	1615	7	12		
	1 (12 - 45.	+ (27 -31.62) +	· · · · † (18-57:33)
	45.	the state of the second second second second	31.62		59.31
1 2	26: 2192 +	0. 6744.	+ 28.7	8	
X0 =	166.34p8		-	-	
		Service Committee	THE RESERVE OF THE PARTY OF THE		

18 18 gill apple X = 146. 8648 Two. & Declared to the second We right Ho. I BE A -- CR COM 012 89 9 2/2/ 1/2/ P-value: df = 9-18-28 (3-1) (3-1) = 4

pchisq (146-36, 8) this gives 1 but we need area to the night, hence = 1-pchisq (146:36,8) = 1-1=0 78 : pralveso. ionlar hodingso Since pralve < 0.05, we reject to the DERI MILES 01.66 1972 315 11534 180 -24-48-1105 4 4 34 N. G. 13 12 20.00 11 13100 Exacted Tides 411