Statistics & Inferencing Homowork #03
Ali Muhammad Ascad
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Chapter 8 -> Ken Black
QQBP8.3) 4281 X247 825.89 CI290%
020.1 Rep 4/220.05 3x12 2 1.645
X- Eve The & MC X + ZX/2 The
47-1.642 [5.39] CM 47+1.645 [5.39/381]
45.923 ENE 48.077
P89) 4236 021.17 CI298% ×20.02 2/22 0.01
24/2 2 2.3263 \(\frac{7}{2} = \frac{7}{2} \frac{1}{2}
3.3056 - 2.3263 (1.17/136) 5 ME 3.3056 + 2.3263 (1.17/136)
2.852 SHE 3.759
0012) 05 0501
P8.13) CI295% u213 X245.615 = Zx2593 Zx2227439 225.47.
2x-227959 625 4220025
t(4/2, u-1) 2 2.1788
45.615 - 2.1738 [5.47/13] < M < 45.615+2.1738 [5.47/13]
42.31 EM 5 49.0
P8.17) CZ299% uz25 Zx2 4022 Zx2 6486.6
\$\frac{16.088}{2 \tau 16.088} \ \siz 2 0.800 Psint Estimate 2 16.088
220.01 4220.005 teares
+(~12, h-1) = 2.7969
16.088 - 2.7969 (0.8/125) 5 M 5 16.088 + 2.7969 (0.8/125)
15.6 = H = 16.54
P8.25) (a) 4244 \$2051. CE290% 201 201221.645
0.51-1.645 (0.51)(0.49)/44 EPE 0.51+1.645 (0.51)(0.49)/44
0-386 50 60.634
(b) 42300 pro-82 (1290% 22005 ta/221.96 p- zaz pg/n Ep L p+ zaz pg/n
p- zaz pajn Ep E p + zaz pajn
(c) uz1150 \$ 20.48 CI 290% 0.456 EP 6 0.504
(6) WILLISO & 10-48 CT = 40% , 0.429 ED ? 0.20A
11) 1295 120.32 172 8881 22/121
(d) u 2 95 \$ 20.32 CF 2 88% 0.246 EP C 0.394

P8.27) 4284 40 items antain characteristic of interest
0 CI 290% (OCI 295% (OCI 2 99%)
220-1 24221.645
p2 478420.48 a20.52
00 pt 21/2 Np.9/n
O CI, 290% (D) CI295% (3) CI299%
0.386 EPG 0.566 0.369 EPG 0.573 0.336 EPG 0.616
1 2 10.0 6 0.0
As the level of confidence increases, the warge of over
confidence interval increases as the value of p deviates more
from the true value - margin of cryor increases.
P8.35) (a) h212 \(\overline{\chi} \) \(\ov
(n-1) 5 / Xxx 6 62 6 (n-1) 52 / X2-01 5 20.01 4/220.005
1 1 1 1 1 2 1 2 2 2 2 2 2 2 2 3 3 2 2 2 6 0 3 2
11x44.9/26.7568 662 6 11x44.9/2.6032
(b) 127 = 4:22 = 121 = 55 = 95 = 1
(b) u27, x2437 S21.24 C[295% Bed20.05 december
5°21.5376 32,000 2 14.4494 3220.025 0.064 662 7.46
(9 u220, x2105, S232, 90%CD d/22005 521024
645.45 £ 62 £ 1923.10
(d) n217, 5°218.56, 80% CD 12.61 56°231.89
(60) 28 = 9
P8.37) uzzo osdz4.3 98% CI 0/220.01
X2,19236.1909 X2,192192 PEECE 7.6327
522(4.3)2
(19)(4.3)2/36.1909 = 62 = (19)(4.3)2/7.6327
9.707 562 5 46.03
Print Estimate 2 52 2 4.32 2 18.49