

Ab Lw	Dem	Rep	Ind	Total
For	82 (85.6)	70 (64.2)	62 (64.2)	214
Against	93 (88.8)	62 (66.6)	67 (66.6)	222
Undecided	25 (25.6)	18 (19.2)	21 (19.2)	64
Total	200	150	150	500

$$e_{11} = \frac{200 \times 214}{500} = 85.6, \quad e_{12} = \frac{150 \times 214}{500} = 64.2$$

$$e_{13} = \frac{150 \times 214}{500} = 64.2, \quad e_{21} = \frac{200 \times 222}{500} = 88.8$$

$$e_{22} = \frac{150 \times 222}{500} = 66.6, \quad e_{23} = \frac{150 \times 222}{500} = 66.6$$

$$e_{31} = \frac{200 \times 64}{500} = 25.6, \quad e_{32} = \frac{150 \times 64}{500} = 19.2$$

$$e_{33} = \frac{150 \times 64}{500} = 19.2$$

$$\alpha = 0.01$$

$$\chi^2 > \chi^2_{\alpha} \quad v = (3-1)(3-1) = \underline{4} \text{ d.f}$$

then the critical region

$$\chi^2 > \underline{13.277}$$

$$\chi^2 = \sum_{i,j} \frac{(o_{ij} - e_{ij})^2}{e_{ij}}$$

$$\# \quad 11 = \frac{(82 - 85.6)^2}{85.6} = 0.15, \quad 12 = \frac{(70 - 64.2)^2}{64.2} = 0.5239$$

$$13 = \frac{(62 - 64.2)^2}{64.2} = 0.075, \quad 21 = \frac{(93 - 88.8)^2}{88.8} = 0.198$$

$$22 = \frac{(62 - 66.6)^2}{66.6} = 0.32, \quad 23 = \frac{(67 - 66.6)^2}{66.6} = 0.0024$$

$$31 = \frac{(25 - 28.6)^2}{28.6} = 0.014, \quad 32 = \frac{(18 - 19.2)^2}{19.2} = 0.075$$

$$33 = \frac{(21 - 19.2)^2}{19.2} = 0.1688$$

$$\chi^2 = \sum_{i,j} \frac{(o_{ij} - e_{ij})^2}{e_{ij}} = \underline{\underline{1.5241}}$$

$$\chi^2 = \underline{\underline{1.5241}}, \quad \chi^2_{0.01} = \underline{\underline{13.277}}$$

$$\underline{\underline{\chi^2 < \chi^2_{0.01}}}$$

So we accept H_0