

Observed

	First	Last	Middle	Only	
E	¹¹ 19	²¹ 26	³¹ 9	⁴¹ 5	59
I	¹² 28	²² 24	³² 13	⁴² 9	74
	47	50	22	14	133

$$E_{11} = \frac{47(59)}{133} = 20.8 \quad E_{31} = \frac{22(59)}{133} = 9.8$$

$$E_{12} = \frac{47(74)}{133} = 26.2 \quad E_{32} = \frac{22(74)}{133} = 12.2$$

$$E_{21} = \frac{50(59)}{133} = 22.2 \quad E_{41} = \frac{14(59)}{133} = 6.2$$

$$E_{22} = \frac{50(74)}{133} = 27.8 \quad E_{42} = \frac{14(74)}{133} = 7.8$$

$$\begin{aligned} \chi^2 = & \frac{(19-20.8)^2}{20.8} + \frac{(28-26.2)^2}{26.2} + \frac{(26-22.2)^2}{22.2} + \\ & \frac{(24-27.8)^2}{27.8} + \frac{(9-9.8)^2}{9.8} + \frac{(13-12.2)^2}{12.2} + \frac{(5-6.2)^2}{6.2} + \\ & \frac{(9-7.8)^2}{7.8} = 1.98 < 10.82 \end{aligned}$$