№8.

H_0: 2 потока однородны

H_1: $\overline{H_0}$

	2	3	4	5	
1 поток	33	43	80	144	)300
2 поток	39	35	72	154	)300

$p_1 = \frac{72}{600}$ $p_2 = \frac{78}{600}$ $p_3 = \frac{152}{600}$ $p_4 = \frac{298}{600}$

$$\widetilde{\Delta}_1 = \frac{\left(33 - 300 \cdot \frac{72}{600}\right)^2}{300 \cdot \frac{72}{600}} + \frac{\left(43 - 300 \cdot \frac{78}{600}\right)^2}{300 \cdot \frac{78}{600}} +$$

$$+ \frac{\left(80 - 300 \cdot \frac{152}{600}\right)^2}{\frac{152}{600} \cdot 300} + \frac{\left(144 - 300 \cdot \frac{298}{600}\right)^2}{300 \cdot \frac{298}{600}} =$$

$$= 1,03$$

$$\widetilde{\Delta}_2 = \frac{\left(39 - 300 \cdot \frac{72}{600}\right)^2}{300 \cdot \frac{72}{600}} + \frac{\left(35 - 300 \frac{78}{600}\right)^2}{300 \cdot \frac{78}{600}} +$$

$$+ \frac{\left(72 - 300 \cdot \frac{152}{600}\right)^2}{300 \cdot \frac{152}{600}} + \frac{\left(154 - 300 \cdot \frac{298}{600}\right)^2}{300 \cdot \frac{298}{600}} =$$

$$= 1,03.$$

$$\widetilde{\Delta} = 2,06$$

$$\Delta \rightsquigarrow \chi^2(3)$$

$$p\text{-value} = P(\Delta \geq \widetilde{\Delta} \mid H_0) = \int_{2,06}^{+\infty} q(t)\,dt = \int_{2,06}^{+\infty} \sqrt{\frac{x}{2\pi}}\, e^{-0,5x}\, dx =$$

$= 0,56 \Rightarrow$ нет оснований отвергнуть H_0.

№9.

$n = 100$

0	1	2	3	4	5	6	7	8	9
5	8	6	12	14	18	11	6	13	7

① $H_0: \varepsilon \sim R(0;9)$