

8.

размер
картин A_0
замк. A_1
точн. A_2
замк. B_1 I

25

50

25

 B_2 II

52

41

7

 $H_0: \xi \text{ и } \eta \text{ независ.}$ $H_1: \overline{H_0}$

$$\Delta \leadsto \chi^2 / ((2-1)(3-1)) =$$

$$= \chi^2(2)$$

$$P_1 = P(B_1) = \frac{1}{2}$$

$$P_2 = P(B_2) = \frac{1}{2}$$

$$q_1 = P(A_1) = \frac{77}{200}$$

$$q_2 = \frac{91}{200}$$

$$q_3 = \frac{32}{200}$$

$$\tilde{\Delta} = \frac{(25 - 77/2)^2}{77/2} + \frac{(52 - 77/2)^2}{77/2} + \frac{(50 - 91/2)^2}{91/2} + \frac{(41 - 91/2)^2}{91/2} +$$

$$+ \frac{(25 - 32/2)^2}{32/2} + \frac{(7 - 32/2)^2}{32/2} \approx 20.48$$

$$p\text{-value} = P(\Delta \geq \tilde{\Delta} | H_0) = \int_{20.48}^{+\infty} q(t) dt \approx 3.57 \cdot 10^{-5} \leq 0.05$$

Отвергаем H_0 .