

9.14 b)

obs.	①	②	
Men	38	68	106
Women	203	150	353
	241	218	459

Expected

exp.	①	②
Men	55.66	50.34
Women	185.34	167.66

exp.	①	②
Men	$\frac{(241)(106)}{459}$	$\frac{(218)(106)}{459}$
Women	$\frac{(241)(353)}{459}$	$\frac{(218)(353)}{459}$

Test Statistic

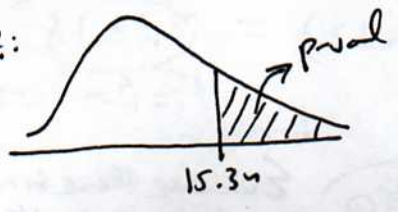
$$\chi^2 = \frac{(38 - 55.66)^2}{55.66} + \frac{(68 - 50.34)^2}{50.34} + \frac{(203 - 185.34)^2}{185.34} + \frac{(150 - 167.66)^2}{167.66}$$

$$= (5.603) + (6.195) + (1.683) + (1.86) = 15.34$$

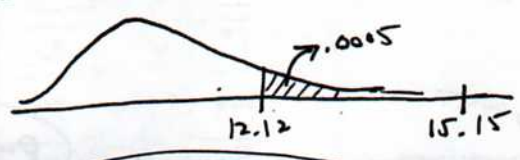
$$df = (2-1)(2-1) = 1$$

from 9.14 (a) $(3.92)^2 \cong 15.34$ (difference due to round-off error)

P-value:



For $df=1$: (use Table F p. T-20)



hence $(p\text{-val}) < .0005$

