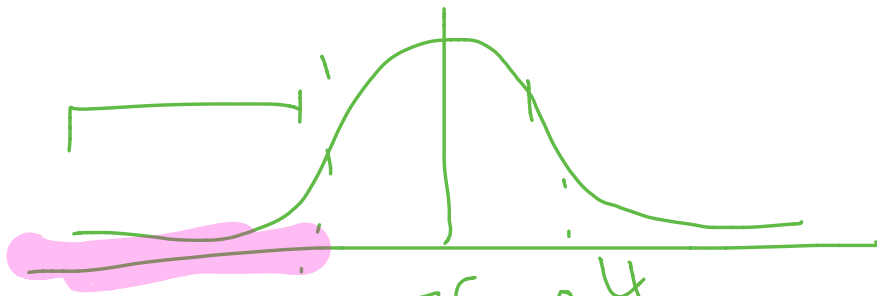


Go over HW -

CH 10 FR p. 609

How do I perform a chi square test for homogeneity?



68 76 84

c. 65.75

$$z = -1.29$$
$$-1.29 = \frac{x - 76}{8}$$

$$n_1 = 40$$

$$p_1 = .7$$

$$n_2 = 40$$

$$p_2 = .5$$

$$12 + 20 = 32$$

$$\sqrt{\sum np(1-p)}$$

$$\sqrt{40(.3)(.7) + 40(.5)(.5)}$$



Norm(df(375,

375,99⁹⁹, 350,171

χ^2 for homogeneity

Comparative
experiment

H_0 : There is no difference
in distribution of response
for patients w/ moderately
severe cases of depression
when taking St. John's Wort,

Zolofit, or placebo.

H_a : There is a diff.

Check Conditions:

Random ✓

Large Sample Size —

All expected counts →

(3/23) are greater than 5.

~~Independence~~ — Knowing
response of one subject will not
affect the other subjects'
responses.

two-way table

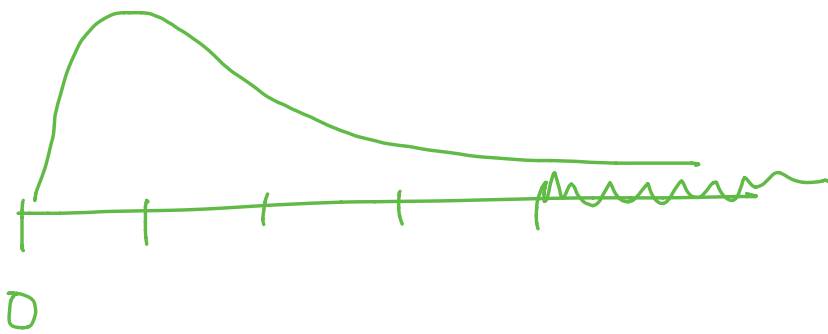
χ^2 for homogeneity

$$df = (\text{rows} - 1)(\text{columns} - 1)$$

$$df = (3 - 1)(3 - 1) = 4$$

Calc: χ^2 cdf(8.72, 1000, 4)

$$P\text{-value} = 0.0685$$



Interpret the p-value in the he context of the problem.

Assuming that the treatments are equally effective, the probability of observing a difference in the distribution of responses among the three treatment groups as large or larger than the one in the study is approximately 0.0685.

1. When do you use a χ^2 for homogeneity?
2. List 3 conditions.