

χ^2 Tests

Grinnell College

April 17, 2024

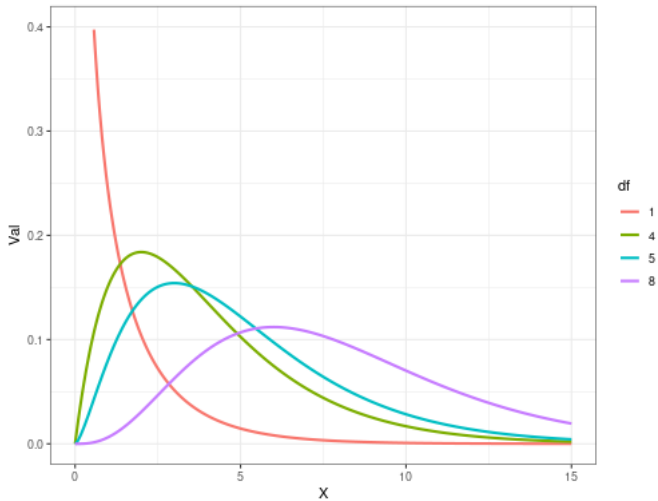
Exams

- ▶ Questions 1-5 graded together (A, 70 points)
- ▶ Questions 6 and 7 graded together (B, 30 points)
- ▶ Score is the maximum of

$$\text{Score} = \max \left(A + B, 80 \times \frac{A}{70} + 20 \times \frac{B}{30} \right)$$

- ▶ Any questions that you left blank can be completed in the next week for 1/2 credit

Chi-squared distribution



Example

Prospective jurors are supposed to be randomly chosen from the eligible adults in a community. The American Civil Liberties Union (ACLU) studied the racial composition of the jury pools in 10 trials in Alameda County, California. Display below is the racial and ethnic composition of the $n = 1,453$ individuals included in the jury pools, along with the distribution of eligible jurors according to US Census data:

Race Ethnicity	White	Black	Hispanic	Asian	Other	Total
Jury Size	780	117	114	384	58	1453
Census Percentage	54%	18%	12%	15%	1%	100%