

Section 2.2

A First Look at Statistical Inference

PART II

Steps to Inference:

- ① Hypothesis; ② Summary Values → Women Avg: 162 cm
→ Men avg: 174 cm
- ③ Shift: the sample of men is shifted to the right of the sample of women. (this may cause the men's average to be greater than the women's).
- ④ Overlap: The samples overlap quite a bit, making clear distinctions more difficult.
- ⑤ Spread (more spread yields more error):
Women: range = $184 - 148 = 36$, Men: range = $189 - 160 = 29$.
- ⑥ Sample size: larger samples yield less error. Both samples are small (size 30).
- ⑦ Meaning in Context: It may be that men are taller (on average) than women.
- ⑧ Extreme cases (can be influential).
The tallest of the women may be influential in raising the average for women.
- ⑨ Inference: It look like the avg. hieght is higher for men.

