Sampling People, Records, & Networks

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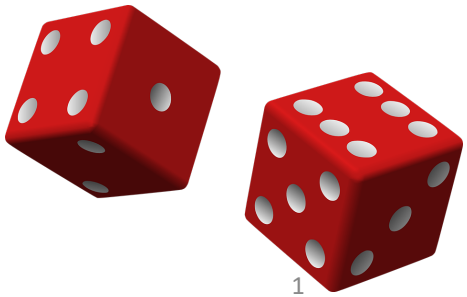
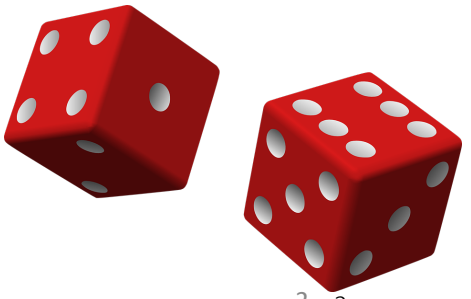
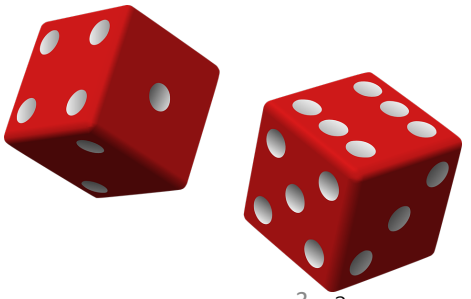


Unit 4

- 1 Forming groups
- 2 Sampling variance
- 3 More on grouping
- 4 Allocate sample
- 5 Other allocations
- 6 Weights



- **Two kinds of weighting**
- **Stratum**
- **Element**



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- As mentioned, weighting the sample is necessary if we are going to combine across subgroups to get back to conclusions about the total population
- Weighting can be done in principle in two ways
- In practice, using statistical software, it is done in only one of these two ways

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- **Stratum**
- Element

- **One weighting method is to weight the stratum estimates by the size of the strata:** $\bar{y} = \sum_{h=1}^{H} W_h \bar{y}_h$

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- **Unfortunately, this is kind of weighting is not done in software**
- **Software only weights by element:** $\bar{y} = \sum_{i=1}^{n} w_i \, y_i$

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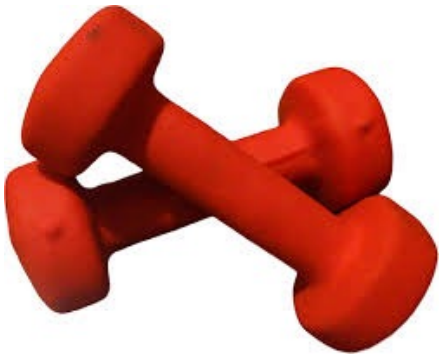
- Is there a way to get the same result, the same $\bar{y}$, using element weights as with stratum weights?
- Yes, if $w_i = \frac{N_h}{n_h}$



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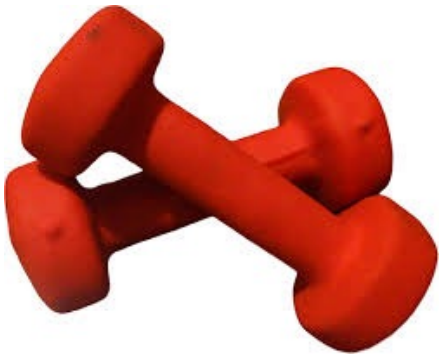
- That is, if $w_i = \frac{N_h}{n_h} = \frac{\mathbf{1}}{\boldsymbol{f}_h}$
- The element weight equivalent is the inverse of the sampling rate, f_h



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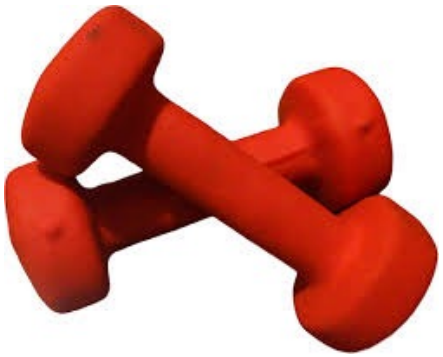
- We will consider this issue of weighting that is equal to the inverse of the sampling rate later in Unit 6



Unit 5

- 1 Selection
- 2 List order
- 3 Intervals with a fractional
- 4 Estimating standard errors

- Unit 1: Sampling as a research tool
- Unit 2: Mere randomization
- Unit 3: Saving money
- Unit 4: Being more efficient
- **Unit 5: Simplifying sampling**
- Unit 6: Some extensions & applications