
2. Ex 3.14, 3.24 (c) (e), 3.41, 3.45

3. Extra Exercise:
   A proper randomization scheme would make the probability of the first two units getting the same treatment the same as the probability that the last two get the same.

Suppose my treatment units are 10 cows on which I will run my experiment, getting one observation per cow. I have 2 treatments, perhaps 2 ways of doing the morning milking of a cow, and I will assign them as follows. For cow 1, I toss a coin. If it comes up heads, I use treatment 1 and if tails, treatment 2. I do the same on all subsequent cows until I have used one of the treatments 5 times. Then I will do the rest of the trials with the other treatment.

Does every cow have the same chance to be assigned to treatment 1, what’s the probability?

Is this a proper randomization?

Hint: compute the probability that cows 9 and 10 will get the same treatment. Compare it with the probability under a proper randomization.

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