8. Exercise: Fresh start

Exercises due May 13, 2020 05:29 IST *Completed*

Exercise: Fresh start

2/3 points (graded)

Consider a Bernoulli process, with a "1" considered a success and a "0" considered a failure. Determine whether the process starts fresh right after each of the following random times:

1. The time of the kth failure

   | No ▾ | ✖ **Answer:** Yes

2. The first time that a failure follows a success

   | Yes ▾ | ✔ **Answer:** Yes

3. The first time at which we have a failure that will be followed by a success

   | No ▾ | ✔ **Answer:** No

Solution:

In the first two cases, the time of interest is determined causally, by past events, and we have the fresh-start property. In the last case, the time of interest is determined by something that is to happen in the future. In particular, we know that right after the time of interest, the next trial will result in a success.

| Submit | You have used 1 of 1 attempt

ⓘ   Answers are displayed within the problem

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? **Q3**
Does anyone understand Q3? If something will be followed by a success it is still independent?

2 new **9**