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| **Sample Statistics** | **Discrete RV** | **Properties** |
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| --- | --- | --- | --- |
|  | Variable: **k** | |  |
| ↓Fixed↓ | # Successes | # Trials/Time until success | ↓Fixed↓ |
| **1** trial |  |  | **1** success |
| **n** trials |  |  | **r** successes |
| Interval of Time |  |  | Interval of time to 1st success |

*Example: Randomly filling a quiz with 4 options for each question. On average we answer 6 questions per minute.*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Variable: **k** | |  |
| ↓Fixed↓ | # Successes | # Trials/Time until success | ↓Fixed↓ |
| **1** trial | Prob of correct answer to next question | :# of questions until we get the first correct answer | **1** success |
| **n** trials | : Prob of correctly answering any 3 out of 4 questions | **:** # of questions until we get 3 correct answers | **r** successes |
| Interval of Time | :Prob of answering four questions in 20 seconds. (λ = 2, because 6 in 60 secs -> 2 in 20 secs) | :Prob of spending from 5 to 8 seconds to answer next question. (λ = 6 / 60 = 0.1) | Interval of time to 1st success |