

Re: Probability question

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- *From:* "Anon." <bob.ohara@xxxxxxxxxxxxxxxxxxxxx>
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Schizoid Man wrote:

I'm confused a bit about this problem.

I have a revolver with 6 compartments that's got bullets in two adjacent compartments. I spin and fire, and get a blank. If one's pointing the gun at oneself (for some odd reason), is there a better chance of survival to pull the trigger again with or without spinning the chamber?

If I hit a blank the first time, then the chances of a blank the second time are (without spinning) $3/5$ or 0.6 vs (with spinning) $4/6$ or 0.667 . So it would seem that spinning is the optimal strategy.

However, things get confusing because the compartments are adjacent. Because the bullets are adjacent it's not possible to get shot by the second bullet, so the probability of hitting an empty compartment is actually $3/4$ or 0.75 , so it would be better to just pull the trigger rather than re-spin.

Is that correct?

It's a problem in conditional probability. Given that the first shot was a blank, what's the probability that the second will be?

I won't give you the answer (this may be homework, in which case it would be wrong to do so, and if it isn't, then you're presumably interested enough to want to work it out). Feel free to write down the possibilities (or at least the positions of the bullets, and count the possible events).

Bob

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Bob O'Hara
Department of Mathematics and Statistics
P.O. Box 68 (Gustaf Hällströmin katu 2b)
FIN-00014 University of Helsinki
Finland

Telephone: +358-9-191 51479
Mobile: +358 50 599 0540
Fax: +358-9-191 51400

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