STA 110E
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Quiz 3

A six sided die has four GREEN and two RED faces, and is balanced so
that each face is equally likely to come up. The die will be rolled several times.
You mush choose one of the following three sequences of colors; you will win 25
dollars if the first rolls of the die give the sequence you have chosen.

RGRRR

RGRRRG

GRRRR

Which sequence should you choose? Explain our choice.

(In a psychological experiment, [1] 63% of 260 students who had not studied
probability chose the second sequence. This is the evidence that our intuitive
understanding of probability is not always good).

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[1] Tversky, A. and Kahneman, D. "Extensional vs. intuitive reasoning: the conjunction
fallacy in probability judgment." *Psychological Review,* 90, (1983).