



Problem of the Week

Problem B

Sanjiv's Blocks

Priya's little brother Sanjiv loves to build towers with his coloured blocks.

- (a) Sanjiv builds a tower with three blocks: two identical red blocks and one green block. If each colour combination is equally likely, what is the theoretical probability that Sanjiv's tower will have the two red blocks next to each other?
- (b) Sanjiv also builds towers with four blocks: two identical red blocks, one green block, and one blue block. If each colour combination is equally likely, what is the theoretical probability that such a tower will have the two red blocks next to each other?
- (c) Priya notices that of the last six four-block towers Sanjiv built, four had the two red blocks next to each other. What is the experimental probability that one of Sanjiv's four-block towers has two red blocks next to each other? Does this observation confirm that Sanjiv does like to have the red blocks together?

