



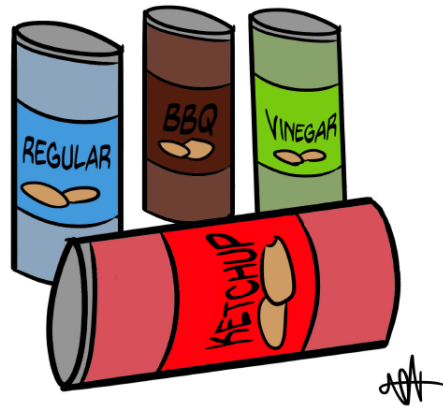
Problem of the Week

Problem B

Three-Chip Stacks

Chip's favourite snack food is Dingles potato chips. He enjoys layering 3 chips together to make a stack of interesting flavours. If he only has Regular flavoured Dingles, there is only one way to stack the three chips. That is Regular, Regular and Regular which can be written as rrr. The order in which the chips are layered does not matter. For example, if we have Regular and BBQ Dingles then the stack BBQ, BBQ and Regular (bbr) is the same as BBQ, Regular and BBQ (brb).

- a) If he has Regular and BBQ flavoured Dingles, list all the different stacks of 3 chips he can make.
- b) If he has three flavours of chips, Regular, BBQ, and Vinegar, list all the different stacks of 3 chips he can make.
- c) If he adds a fourth flavour, Ketchup, list all the different stacks of 3 chips he can make.



SUGGESTION: You may use the following boxes to help you organize the possible stacks. You may also want to use r to represent Regular, b for BBQ, v for Vinegar, and k for Ketchup.

Part a)

Part b)

Part c)