

Example

How many length 5 strings over the alphabet $\{a, b, c, \dots, z\}$ contain:

Exactly 2 'a's OR

Exactly 1 'b' OR

No 'x's

For what A, B, C do we want $|A \cup B \cup C|$?

One More Counting Rule

It's the start of spring and you want to plant a 3x4 plot on your farm.

You're going to go to Pierre's General Store to buy twelve seeds.

There are parsnip, cauliflower, potato, kale, and garlic seeds (i.e. five types of seeds)

How many different 12 seed orders can you make?

Consider two orders the same if they contain the same number of every type of seed (order doesn't matter).

