

Combinatorics Warm-up

1. What are the formulas for (n items, k slots)
 - i. Permutations with reputation
 - ii. Permutations without reputation
 - iii. Combinations without repetition
 - iv. Combinations with repetition (you may have to derive this one, remember the ice cream shop analogy with robots)
2. Define a one-is-to-one correspondence (aka bijection) and describe how it is used in AMC problems