

quiz 04.1

(1) How many permutations of 7 things are there with at least 3 fixed-points?

(2) How many permutations of order 12 are there of 8 things?

(3) There are 3 red balls and 4 blue balls in an urn. What is the expected number of red balls drawn in 13 draws (with replacement)?

(4) There are 7 red balls and 12 blue balls in an urn. You draw repeatedly (with replacement). What is the expected number of draws necessary so that you'll have drawn at least one ball of each color?