

## MS121 Discrete Mathematics, Tutorial 10

1. How many different distributions of  $a$ 's,  $b$ 's and  $c$ 's are there among the 27 strings of length 3 in the letters  $a$ ,  $b$  and  $c$ ?
2. In how many different ways can 7 identical objects be distributed between 3 ordered boxes, box 1, box 2, and box 3? For how many of these distributions is there at least one object in each box?
3. A group of 20 students are to be assigned to 4 teams of 5, a red team, a blue team, a green team and a yellow team. In how many ways can this be done?
4. Compute the coefficient of  $x^2y^3$  in the expansion of  $(x + y + 1)^7$ .