



There are twenty-two gloves in a drawer: five pairs of blue gloves, four pairs of orange and two pairs of green. If the lights are out and you must select the gloves in the dark, how many must you choose to ensure that you have at least one matching pair?



If there is no left-right difference between the gloves then it is enough to choose only four gloves - since the number of colors is three, even if the first three selected gloves are all of different colors, the fourth one will be of one of the three colors, thus, matching in color with one of the previous three.

But in our case it is also very important to consider the left-right issue connected with the pairs of gloves. There are eleven left gloves and eleven right gloves in the drawer. There is a probability all eleven left gloves are selected in a row. After that the twelfth one will be definitely right and of one of the colors of the previous eleven gloves. In other words the twelfth one creates the pair. Thus, it is enough to choose 12 gloves to ensure that you have at least one matching pair.