

SAME SWEETS



In a bag there are a large number of green, white, yellow, orange and red sweets with equal numbers of each colour (5 flavours). You pick sweets from the bag without looking.



If you pick 2 sweets what different combinations of colours can you get?

If you pick 2 sweets how likely are you to pick two of the same colour?

If you pick 6 sweets what is the probability that two are the same colour?

HELP

One of the 'golden rules' of problem solving is to work on simple cases when a problem seems difficult.

If you find this problem difficult first solve the simpler problem for a bag of sweets with only 2 colours. Ask the same questions.

If you pick 2 sweets how likely are you to pick two of the same colour?

If you pick 6 sweets what is the probability that two are the same colour?

After that, progress to a bag of sweets with three colours and solve the same problem. Then solve the problem for a bag of sweets with 4 colours.

You should then easily be able to solve the problem for 5 colours.

NEXT

What is the probability that, in a group of 6 people, two people have birthdays in the same month?

What if the group has 7 people?

What if the group has more than twelve people?

<https://aiminghigh.aimssec.ac.za/same-birth-month/>