2. Suppose you are picking a t-shirt in some online store. The t-shirt comes in 5 possible colours, 7 possible sizes and 2 neck types (crewneck and v-neck). How many possible variants of the t-shirt are there?

1 / 1 point

70

Correct

This is correct! Indeed, we have to make three choices, with 5, 7 and 2 options respectively. But the rule of product there are 5x7x2=70 options in total.

1. Suppose there are five teams in some sport participating in some tournament. Each team contains 8 players. We would like to choose one of the players of one of the teams to lead an opening ceremony. How many ways do we have to do it?

1 / 1 point

40

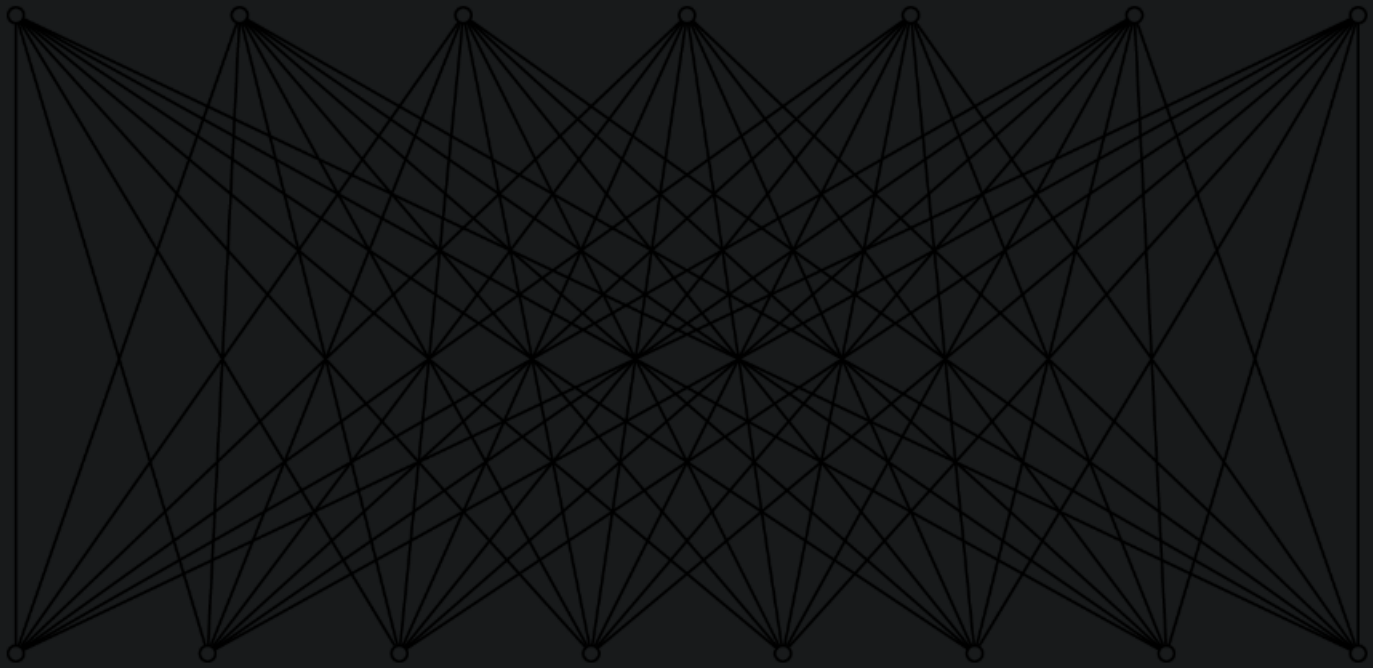
Correct

This is correct! This is exactly the number of players participating in the tournament.

We can also think of this in the following way. We have actually to make two sequential choices: first we need to pick a team and then one player in it. And we are actually computing pairs of these choices. We can make the first choice in 5 ways and the second choice in 8 ways. Then by the product rule we have 5x8=40 possible choices in total.

3. What is the number of segments in the picture below? Each segment joins two circles.

1 / 1 point



56

Correct

This is correct! Each circle on the top is connected to each circle on the bottom. So to pick a segment we need to pick one circle on the top and one circle on the bottom. There are 7 circles on the top and 8 circles on the bottom. So by the rule of product the number of segments is $7 \times 8 = 56$