LUCKY ME!

We have often heard (and we say): 'Lucky me!', 'My bad luck…!'. But we sometimes do it without sense and it is quite frequent that when hearing it not everybody agrees.

Probably, you have never thought that it is a mathematical problem (more precisely, it is a probabilistic problem or study of possibilities).

If in a raffle of 100 numbers you only have 3 and you get the prize, it is undoubtedly because of your good luck, since the possibility of choosing one of your numbers was 3/100 = 0,03 ? 3%.

If they are going to make you a question in the exam, chosen among the 10 possible, you have only studied 8 questions and they ask you one of the ones you have not studied, you have had a bad luck, since the possibility that they would ask you one of the questions that you had studied was of 8/10=0,8º80%.

Games, for instance 'ludo', are situations in which we often talk about luck. If I have to start with a counter and I get a 5 in the first throw, we all agree I have been very lucky; if after 15 throws I haven't got a 5 yet, my bad luck…!; but if after 4 throws, I haven't got it, can I say I have had a bad luck?

To know what happens, the best thing is to experiment:

- Make the experience 25 times and write down the results in board 1.
- You will probably think that 25 times is not enough. For that reason, you are going to gather the results of each member of the team in an only board (board 2).

✍✍From the data of board 2 you will only have to make some calculations in order to graphically represent the results (of the group) we are interested in observing (accumulated bar chart).

Individual results of: .....

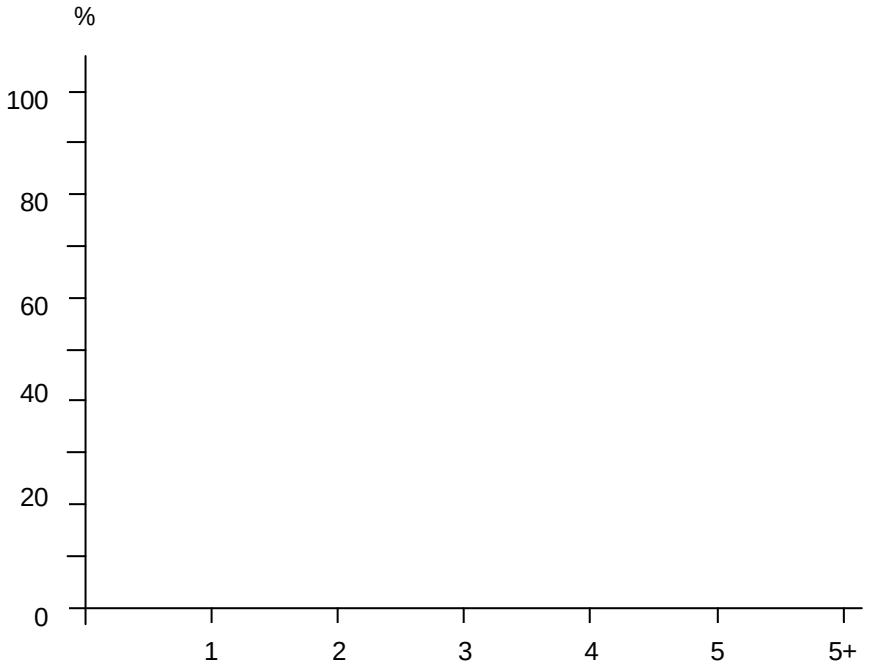
Throw with a 5	Recount frecuency (I I I …)	Number of times
1st		
2nd		
3rd		
4th		
5th		
After the 5th		
TOTAL		**25**

Board 1

Group results

Throw with a 5	Number of times
1st	
2nd	
3rd	
4th	
5th	
After the 5th	
TOTAL	**100**

Board 2



Throw with a 5
(4 indicates it was in the 1st, 2nd, 3rd or 4th throw)

The graphical representation made from the results of the group will help you to answer properly to any question related to the considered case :

- If you are trying to bring out a counter and you get the 5 before the fourth throw, have you had good or bad luck?, and if you get it before the 5th thrown? If you have already thrown 6 times and you still have not got it, are you in good or bad luck?
- Now, each one of you will have to calculate the percentage of times that you have had luck in your 25 experiences. Who has been the luckiest?. What could you do to be more sure than your answers are correct?

YOU WILL NEED:

Four dice and a blank sheet to copy down the board and the graphic you have to complete.