

## Too Many Boys in the Family?



1. What is the probability of a baby being born a boy?
2. If Mr & Mrs Stevens already have 3 boys does this increase the likelihood of them having a girl if they have a fourth child?
3. If Mr & Mrs Suker have 2 children what is the probability of having 2 boys?
4. Is it more, less or the same as them having 1 boy and 1 girl?
5. If they have a third child what are the probabilities now? How likely is it they will have 3 boys?
6. Can you work out the probability of a family having 8 children who are all boys?
7. Which is more likely 3 boys in a family of 3 children or 2 girls and 3 boys in a family of 5 ?

Use the data below, from CensusAtSchool, and contrast it with the theoretical probabilities for different combinations of boys and girls within families. Can you show this in an interesting or pictorial way?

No. of children in family	Number of families	0 Boys	1 Boy	2 Boys	3 Boys	4 Boys	5 Boys
1	9962	5250	4712				
2	27782	6688	14814	6280			
3	14264	1788	5266	5275	1935		
4	4765	332	1118	1760	1172	383	
5	1436	59	236	422	422	227	70

Answers: 1) 0.5 2)no 3) 0.25 4) less as prob 1 of each is 0.5 5) 3 g or 3b 0.125 each 2g1b or 2b1g 0.325 each 6) 0.004 7) 2g3b in 5 (0.3125)