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1

If we have two children and one older child is a boy. We can know there are four equally probable events: `{BG},{BB},{GB},{GG}`. Because both of the P{BB, BG} are equally likely, and get only one boy from {BB}, includes two boys. So the probability of the second boy `b` is : $$P(BB|b)=P(b|BB) \times \frac {P(BB)} {P(b)} = 1 \times \frac {\frac 1 4} {\frac 1 2}=\frac 1 2$$

2

If we have children and know at least one is a boy. Let's the probility of the second boy `B` is : $$P(BB|B)=P(B|BB) \times \frac {P(BB)} {P(B)} = 1 \times \frac {\frac 1 4} {\frac 3 4}=\frac 1 3$$