Sample Spaces

Consider couplse that have two children. Treating the gender of the children as an **ordered pair** outcome of a random experiment, the sample space is

$$\mathbf{S} = \{(b, b), (b, g), (g, b), (g, g)\}.$$

Let us assume that each sample point is **equiprobable**, with probability 0.25 for each sample point.

Sample Spaces

Find the probability p that both children are girls if it is known that:

(a) at least one of the children is a girl,

(b) the older child is a girl.

Sample Spaces

Part a

Find the probability p that both children are girls if it is known that at least one of the children is a girl.

$$\mathbf{S} = \{(b, b), (b, g), (g, b), (g, g)\}.$$

Part b

Find the probability p that both children are girls if it is known that the older child is a girl.

$$\mathbf{S} = \{(b, b), (b, g), (g, b), (g, g)\}.$$