

# Assume Equal Chance of Both Options

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In such cases, we often **assume** that **all** such **events** are **equally likely**.

**It's a dumb assumption.**

**But what else can we do?**

In that case, our earlier comparison makes sense

$$\begin{aligned} & \frac{1}{2} \cdot \text{probability (got a 4 | Pat rolled one die)} \\ & = \frac{1}{2} \cdot \frac{1}{6} = \frac{1}{12} \end{aligned}$$

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$$\begin{aligned} & \frac{1}{2} \cdot \text{probability (got a 4 | Pat rolled two dice)} \\ & = \frac{1}{2} \cdot \frac{1}{12} = \frac{1}{24} \end{aligned}$$