

# 1 Discrete random variables

We consider the chance experiment of rolling two fair dices.

1. Give the sample space  $\Omega$ .
2. Formally give the event *the sum of the thrown values is four*.
3. Introduce the random variable  $X$  of the sum of the thrown values.
4. Give the PMF  $p$  of  $X$ .
5. Compute the mean of  $X$ .

## 2 Continuous random variables

Let  $X$  be a uniformly distributed RV  $X \sim \mathcal{U}[-1, 1]$ .

1. Give its density.
2. Give its CDF and plot it.
3. Compute its mean.