Section 2: Probability distributions

Exercise level 1

1. A fair octahedral die numbered 1, 2, 3, 4, 5, 6, 7, 8 is thrown. The number shown on the die is the random variable X.
   Tabulate the probability distribution of X.

2. The table shows the probability distribution of the random variable X.
   Find the value of the constant k.

x	1	2	3	4	5
$P(X = x)$	k	$2k$	$3k$	$2k$	k

3. A fair octahedral die numbered 1, 2, 1, 1, 2, 6, 6, 6 is thrown. The number on the die is the random variable Y.
   Tabulate the probability distribution of Y.

4. Two unbiased spinners, each numbered 1, 2, 3, 4, 5 are spun. Let Z be the sum of the two results.
   Tabulate the probability distribution of Z.