Rolling two fair dice

Assume that two independent fair dice are tossed. There are 36 equally likely possible outcomes.

\[
\begin{align*}
\text{P}(\text{sum} = 2) &= 1/36 \\
\text{P}(\text{sum} = 3) &= 2/36 \\
\text{P}(\text{sum} = 4) &= 3/36 \\
\text{P}(\text{sum} = 5) &= 4/36 \\
\text{P}(\text{sum} = 6) &= 5/36 \\
\text{P}(\text{sum} = 7) &= 6/36 \\
\text{P}(\text{sum} = 8) &= 5/36 \\
\text{P}(\text{sum} = 9) &= 4/36 \\
\text{P}(\text{sum} = 10) &= 3/36 \\
\text{P}(\text{sum} = 11) &= 2/36 \\
\text{P}(\text{sum} = 12) &= 1/36
\end{align*}
\]