

$$\begin{aligned}
2^5 &= (1+1)^5 \\
&= \binom{5}{0} \cdot 1^5 + \binom{5}{1} \cdot 1^4 \cdot 1 + \binom{5}{3} \cdot 1^3 \cdot 1^2 \\
&\quad + \binom{5}{3} \cdot 1^2 \cdot 1^3 + \binom{5}{4} \cdot 1 \cdot 1^4 + \binom{5}{5} \cdot 1^5 \\
&= \binom{5}{0} + \binom{5}{1} + \binom{5}{2} + \binom{5}{3} + \binom{5}{4} + \binom{5}{5}
\end{aligned}$$