

3.14

$$\begin{aligned}(1+x)^5 &= \sum_{k=0}^5 \binom{5}{k} 1^{5-k} x^k = \sum_{k=0}^5 \binom{5}{k} x^k \\ &= \binom{5}{0} x^0 + \binom{5}{1} x + \binom{5}{2} x^2 + \binom{5}{3} x^3 + \binom{5}{4} x^4 + \binom{5}{5} x^5 \\ &= 1 + 5x + 10x^2 + 10x^3 + 5x^4 + x^5\end{aligned}$$