$$
\begin{array}{rl}
p(x) = & a_0 + a_1 x + \cdots + a_m x^m + a_{m+1} x^{m+1} + \cdots + a_n x^n \\
q(x) = & b_0 + b_1 x + \cdots + b_m x^m \\
\hline
p(x) + q(x) = & (a_0 + b_0) + (a_1 + b_1) x + \cdots + (a_m + b_m) x^m + a_{m+1} x^{m+1} + \cdots + a_n x^n
\end{array}
$$