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t-sion of Two Polynomial Sequences and Factorization Properties,
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Abstract

Certain second-order recurrence sequences (G_n) and (H_n) give the coefficients for sequences P and Q of polynomials in $\mathbb{R}[x]$. The t -sion of P and Q , denoted by $P \circ_t Q$, is then defined so as to generalize both the fusion and fission of P and Q . Specifically, $P \circ_t Q$ is the fusion of P and Q if $t = 1$ and the fission if $t = -1$. Choosing Q in a certain manner derived from P gives a sequence \tilde{P} for which $P \circ_t \tilde{P}$ is the self t -sion of P . Explicit formulas are obtained for the polynomials in $P \circ_t \tilde{P}$.