A REPRESENTATION OF THE LAGRANGE INTERPOLATION POLYNOMIAL

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Let $\mathscr{Z} = \{z_0, \ldots, z_m\}$ be a list of complex numbers (should not be confused with the same symbol denoting sets) and let $\{\mathscr{Z}_0, \ldots, \mathscr{Z}_n\}$ be a partition of $\mathscr{Z}$. We write the Lagrange-Hermite interpolating operator $L[\mathscr{Z}]$ in terms of the operators $L[\mathscr{Z}_i]$. We also give a closed form of the power series $\displaystyle\sum_{k=1}^{\infty} \frac{z^k}{(k + t_0) \ldots (k + t_n)}$, where t_i are positive numbers, $n \geq 1$, and $|z| \leq 1$, in terms of the divided difference of Lerch and Digamma function.

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