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Convergent expansions of special functions in terms of elementary functions

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In literature we can find a variety of expansions (convergent or not) of different special functions. Usually, these expansions are not valid at the same time for small and large values of variable. In this work, and using a simple technique, we propose new uniform convergent expansions of several special functions in terms of elementary functions. These expansions are accompanied by error bounds and numerical experiments showing the accuracy of the approximations.

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