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ANALYSIS AND SOLUTION OF COMPLEX ORDER DIFFERENTIAL EQUATIONS USING SINGULAR KERNEL

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Abstract. This article employs the two-step Adomian decomposition method (TSADM) to obtain a solution of a fractional differential equation with complex order using the singular kernel operator. Moreover, we have provided conditions for the existence and uniqueness of a solution with the fixed point theorems. Also, we have mentioned examples and solved them with the help of the proposed method and found the analytical solution in one iteration.

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