

**REDUCTION A THREE-LAYER SEMI-DISCRETE SCHEME TO TWO-LAYER SCHEMES
AND ERROR ESTIMATION FOR APPROXIMATE SOLUTION**

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SUMMARY

In a Banach space, for the approximate solution of the Cauchy problem for an evolution equation, considered purely implicit semidiscrete three-layer scheme. Using the perturbation algorithm this scheme reduced to the two-level schemes. Explicit estimates for the approximate solution error are proved.