

Stability of Explicit and Implicit Methods

Solution Computed at $x=0.5$ and $t=1$

	Explicit	Implicit
0.2000E+02	0.7457E+33	0.4226E-03
0.1000E+02	0.4135E+60	0.1906E-03
0.4000E+01	0.1094+115	0.1057E-03
0.1000E+01	0.6906+187	0.7557E-04
0.5333E+00	0.6586E+35	0.7151E-04
0.5063E+00	0.1865E+03	0.7128E-04
0.5000E+00	0.6427E-04	0.7122E-04
0.4000E+00	0.6451E-04	0.7038E-04
0.2000E+00	0.6578E-04	0.6871E-04

Fourier Series (Maple)

$$u(0.5,1.0) = 0.65856e-4$$

