

$u = tx(x - 1)(\sin(50x) + 100t \cos(50x))$; with DE $a_1 \frac{du}{dt} - a_2 u_{xx} + a_3 u + a_4 u^2 = f(x, t)$ on $[0, 1]$

D6

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	2.397443e+001		1.000000e+000
0.125000	3.263169e+001	-0.462444	1.000000e+000
0.062500	4.413732e-001	5.737531	1.000000e+000
0.031250	4.921592e-001	-0.136139	1.000000e+000
0.015625	1.160314e-001	1.733930	1.000000e+000

D8

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	2.298974e+001		1.000000e+000
0.125000	1.157696e+001	1.029046	1.000000e+000
0.062500	1.340203e-001	5.945042	1.000000e+000
0.031250	2.358766e-001	-0.706647	1.000000e+000
0.015625	1.488956e-002	3.315178	1.000000e+000

D10

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	6.795759e+001		1.000000e+000
0.125000	8.784762e+001	-0.385080	1.000000e+000
0.062500	2.344632e-001	7.901414	1.000000e+000
0.031250	1.208833e-001	0.828091	1.000000e+000
0.015625	4.780177e-003	3.876417	1.000000e+000

D12

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	1.307854e+001		1.000000e+000
0.125000	3.018642e+001	-1.254629	1.000000e+000
0.062500	8.082181e-001	4.827087	1.000000e+000
0.031250	6.528905e-002	3.145010	1.000000e+000
0.015625	2.487708e-003	3.920955	1.000000e+000

D14

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	9.619871e+000		1.000000e+000
0.125000	1.689368e+002	-4.298541	1.000000e+000
0.062500	7.483076e+000	4.155841	1.000000e+000
0.031250	3.886597e-002	6.575350	1.000000e+000
0.015625	2.147454e-003	3.475004	1.000000e+000

D16

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	1.905615e+001		1.000000e+000
0.125000	1.023033e+002	-2.520829	1.000000e+000
0.062500	1.057314e+000	6.096280	1.000000e+000
0.031250	2.581504e-002	4.640663	1.000000e+000
0.015625	1.908982e-003	3.125264	1.000000e+000

D18

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	3.753381e+001		1.000000e+000
0.125000	1.004511e+001	1.977234	1.000000e+000
0.062500	1.573336e+000	2.471850	1.000000e+000
0.031250	1.929418e-002	5.501438	1.000000e+000
0.015625	1.796386e-003	2.848833	1.000000e+000

D20

h	Euclidean Error	Euclidean Convergence Rate	Condition Number
0.250000	2.712149e+001		1.000000e+000
0.125000	9.941130e+000	1.505468	1.000000e+000
0.062500	1.204116e+000	2.814580	1.000000e+000
0.031250	1.666747e-002	5.350053	1.000000e+000
0.015625	2.163951e-003	2.449827	1.000000e+000