1 01-01 tests

Example 1.1. In this tests we consider:

- $\psi(x) = \exp(x)$
- $\psi_{\mathrm{l}} = 1$
- $\psi_{\mathrm{r}} = e$
- $\psi_{\mathrm{ll}} = 1$
- $\psi_{\mathrm{rr}} = e$
- $g(x) = -\exp(x)$
- in $\widehat{\psi}_1$ and $\widehat{\psi}_I$ we reconstruct a polynomial of degree $d+1$

Table 1: Numerical results of PRO1 scheme to the example 1.1.

		$\omega = 1\|1,1$		$\omega = 1\|3,1$		$\omega = 1\|3,3$		$\omega = 1\|3,10$	
	I	$\mathrm{E}_{\infty,0}$	$\mathrm{O}_{\infty,0}$	$\mathrm{E}_{\infty,0}$	$\mathrm{O}_{\infty,0}$	$\mathrm{E}_{\infty,0}$	$\mathrm{O}_{\infty,0}$	$\mathrm{E}_{\infty,0}$	$\mathrm{O}_{\infty,0}$
$\mathbb{P}_3(4)$	20	6.89E−05	—	4.01E−05	—	4.01E−05	—	4.01E−05	—
	40	8.09E−06	3.09	4.87E−06	3.04	4.87E−06	3.04	4.87E−06	3.04
	80	8.53E−07	3.25	4.91E−07	3.31	4.91E−07	3.31	4.91E−07	3.31
	160	7.67E−08	3.48	3.66E−08	3.74	3.66E−08	3.74	3.66E−08	3.74
	200	3.38E−08	3.67	1.53E−08	3.93	1.53E−08	3.92	1.53E−08	3.92
	240	1.71E−08	3.74	7.44E−09	3.94	7.44E−09	3.95	7.46E−09	3.94