

ℓ	Dofs \mathbf{u}_h/p_h	$\ \mathbf{u} - \mathbf{u}_h\ _{L^2(\Omega)}$	order	$\ \mathbf{u} - \mathbf{u}_h\ _{H^1(\Omega)}$	order	$\ p - p_h\ _{L^2(\Omega)}$	order
1	42/8	2.9742e-01	-	2.1371e+00	-	3.1095e+00	-
2	130/21	1.3831e-01	1.36	1.6315e+00	0.48	1.9048e+00	1.02
3	450/65	5.1320e-02	1.60	1.1344e+00	0.59	1.2689e+00	0.72
4	1,666/225	1.9262e-02	1.50	7.8207e-01	0.57	8.5963e-01	0.63
5	6,402/833	7.4933e-03	1.40	5.3755e-01	0.56	5.8594e-01	0.59
6	25,090/3,201	3.0492e-03	1.32	3.6899e-01	0.55	4.0057e-01	0.57
7	99,330/12,545	1.2976e-03	1.24	2.5313e-01	0.55	2.7424e-01	0.55
8	395,266/49,665	5.7285e-04	1.18	1.7360e-01	0.55	1.8790e-01	0.55

Table 1: Convergence for 2D MHD singular solution

ℓ	Dofs \mathbf{b}_h/r_h	$\ \mathbf{b} - \mathbf{b}_h\ _{L^2(\Omega)}$	order	$\ \mathbf{b} - \mathbf{b}_h\ _{H(\text{curl}, \Omega)}$	order	$\ \mathbf{r}_h\ _{L^2(\Omega)}$
1	13/8	2.0522e-01	-	2.0522e-01	-	0.0000e+00
2	44/21	1.2596e-01	0.80	1.2596e-01	0.80	8.4489e-14
3	160/65	7.8280e-02	0.74	7.8280e-02	0.74	6.6627e-13
4	608/225	4.9022e-02	0.70	4.9022e-02	0.70	3.8403e-13
5	2,368/833	3.0809e-02	0.68	3.0809e-02	0.68	5.7991e-13
6	9,344/3,201	1.9390e-02	0.67	1.9390e-02	0.67	1.5252e-12
7	37,120/12,545	1.2211e-02	0.67	1.2211e-02	0.67	2.4183e-12
8	147,968/49,665	7.6912e-03	0.67	7.6912e-03	0.67	1.5161e-11

Table 2: Convergence for 2D MHD singular solution (magnetic field)