

Test results with Reynolds Number = 1

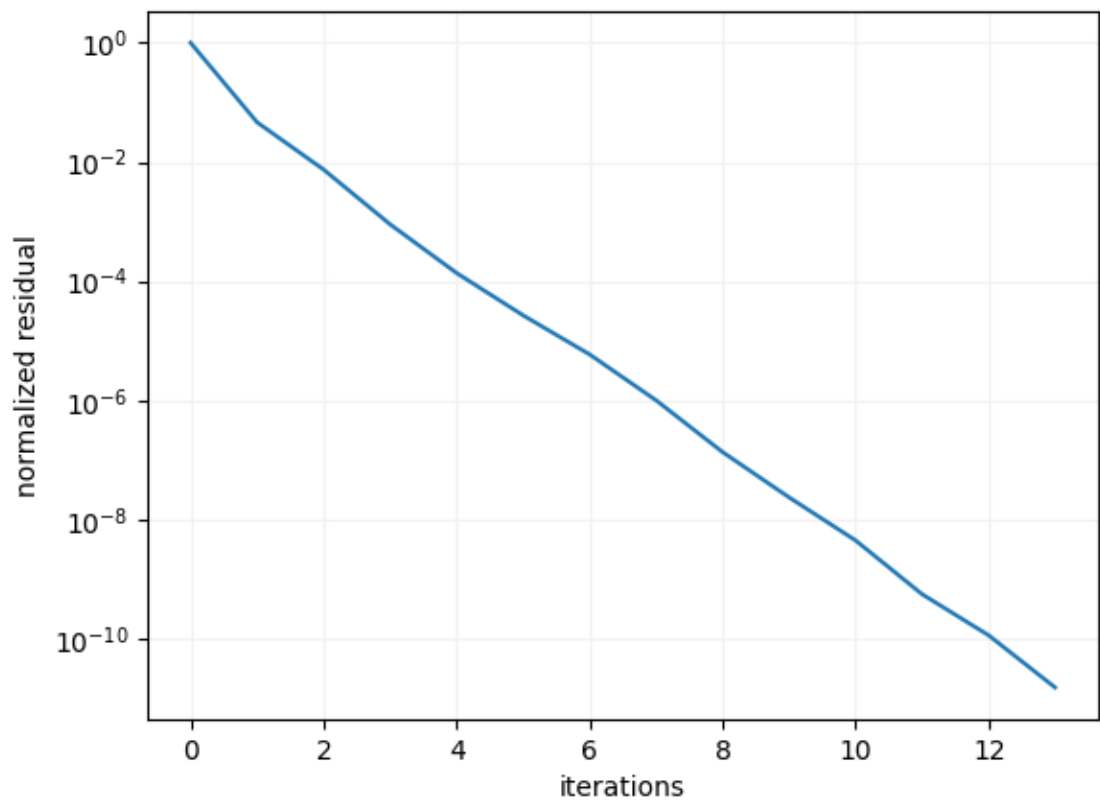
MultilevelSolver
Number of Levels: 10
Operator Complexity: 3.818
Grid Complexity: 2.032
Coarse Solver: 'splu'

level	unknowns	nonzeros	
0	24656	1683200	[26.19%]
1	13872	1438208	[22.38%]
2	6384	1403392	[21.84%]
3	2848	1062656	[16.53%]
4	1312	561152	[8.73%]
5	592	210176	[3.27%]
6	256	53248	[0.83%]
7	112	12544	[0.20%]
8	48	2304	[0.04%]
9	16	256	[0.00%]

[12.547704697048077, 0.5806897657677398, 0.09358110215155843, 0.011280914356808138, 0.001718771537750761, 0.0003351324388196483, 7.413496697502577e-05, 1.2575763125704846e-05, 1.7030173182540374e-06, 2.9572341730552024e-07, 5.607809579334339e-08, 7.023025758779954e-09, 1.4370781502677598e-09, 1.9137269124106715e-10]

AMG solver results

n	iter	rho	OpCx	GdCx	Work
24656	14	0.17	3.8	2	4.9



Test results with Reynolds Number = 10

MultilevelSolver

Number of Levels: 10

Operator Complexity: 3.555

Grid Complexity: 1.990

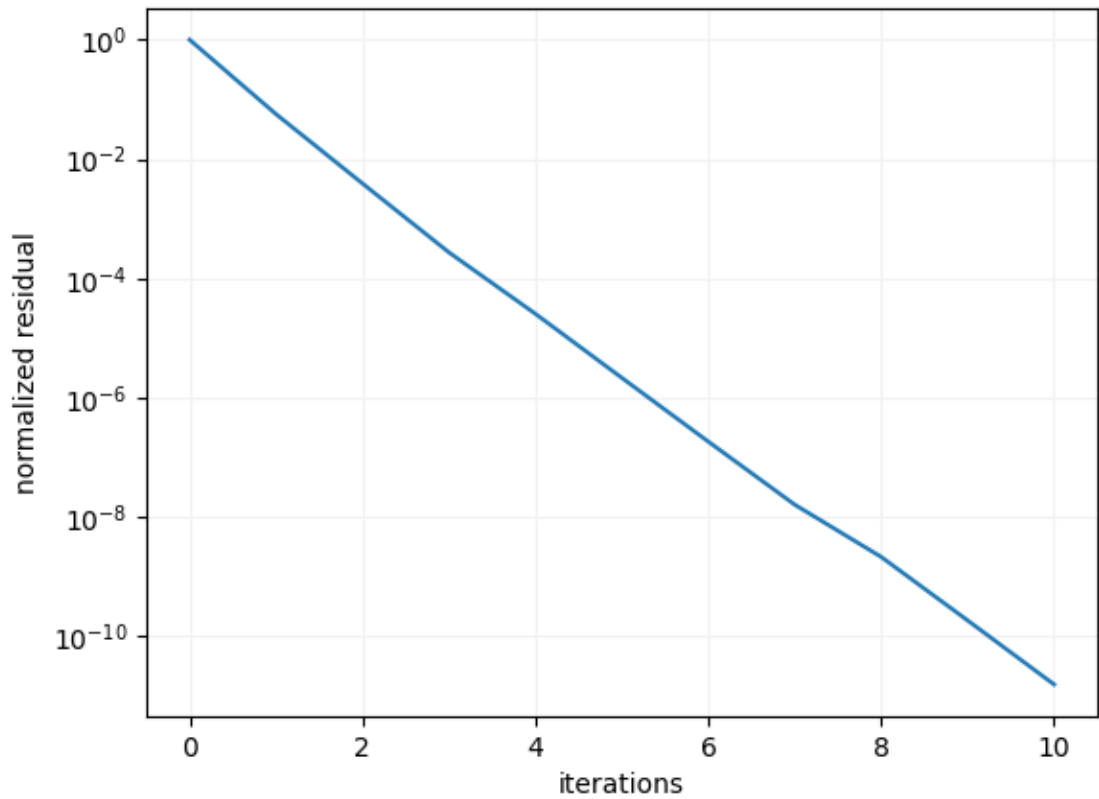
Coarse Solver: 'splu'

level	unknowns	nonzeros
0	24656	1683200 [28.13%]
1	13744	1412096 [23.60%]
2	6144	1263872 [21.12%]
3	2496	960256 [16.05%]
4	1136	464384 [7.76%]
5	480	135680 [2.27%]
6	240	50688 [0.85%]
7	112	12544 [0.21%]
8	32	1024 [0.02%]
9	16	256 [0.00%]

[8.683895760746099, 0.49124836138629585, 0.03374710991915815, 0.0023581357749602925, 0.00022023728924598456, 1.8573037778906878e-05, 1.5842704062807548e-06, 1.3868441588523175e-07, 1.8440343487023657e-08, 1.5870008605430659e-09, 1.3396505461066524e-10]

AMG solver results

n	iter	rho	OpCx	GdCx	Work
24656	11	0.1	3.6	2	3.6



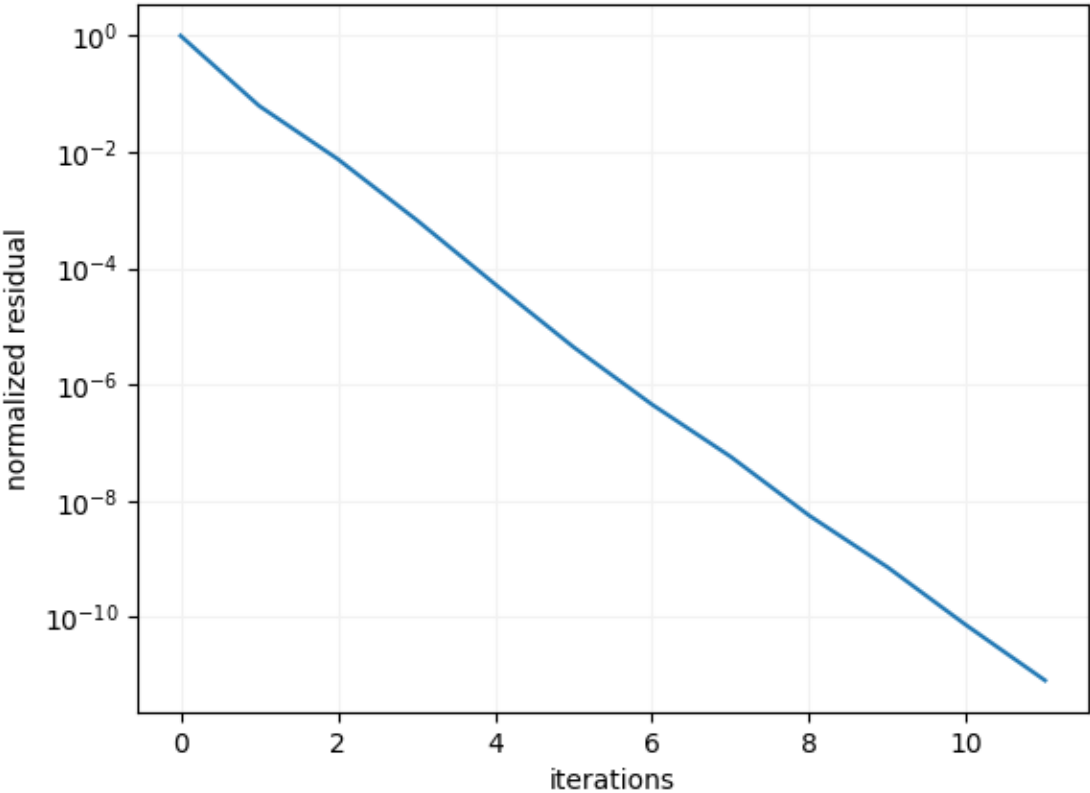
Test results with Reynolds Number = 1000

MultilevelSolver		
Number of Levels:		11
Operator Complexity:		3.591
Grid Complexity:		1.999
Coarse Solver:		'splu'
level	unknowns	nonzeros
0	24656	1683200 [27.85%]
1	13744	1419008 [23.48%]
2	6048	1257984 [20.81%]
3	2544	924672 [15.30%]
4	1168	472576 [7.82%]
5	592	195840 [3.24%]
6	288	66560 [1.10%]
7	144	19200 [0.32%]
8	64	4096 [0.07%]
9	32	1024 [0.02%]
10	16	256 [0.00%]

[8.604155473104075, 0.534664123416188, 0.06502367958209745, 0.005875371038981982, 0.0004593112575605562, 3.790174906699753e-05, 3.886713893786205e-06, 4.930654706383032e-07, 4.777431277223174e-08, 6.1376581730938854e-09, 6.181267954222958e-10, 6.970568113658435e-11]

AMG solver results

n	iter	rho	OpCx	GdCx	Work
24656	12	0.12	3.6	2	3.9



Test results with Reynolds Number = 10000

MultilevelSolver		
Number of Levels: 10		
Operator Complexity: 3.539		
Grid Complexity: 1.990		
Coarse Solver: 'splu'		
level	unknowns	nonzeros
0	24656	1683200 [28.25%]
1	13744	1419008 [23.82%]
2	6048	1257984 [21.12%]
3	2544	924672 [15.52%]
4	1136	453632 [7.61%]
5	512	160000 [2.69%]
6	240	45312 [0.76%]
7	112	11008 [0.18%]
8	48	2304 [0.04%]
9	16	256 [0.00%]

[8.3964715087524, 0.5196570428161421, 0.06491248006905406, 0.005767865474658872, 0.00046775286921277, 3.774783975138717e-05, 3.914775830834613e-06, 4.645927811862862e-07, 5.5384885654540616e-08, 6.7517531093349124e-09, 6.190433990240024e-10, 8.281627286581522e-11]

AMG solver results						
n	iter	rho	OpCx	GdCx	Work	
24656	12	0.12	3.5	2	3.9	

