Table 1. Time consuming and Iterations of two methods

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dimensions | Vcycle | | Itercycle | |
| Time (ms) | No. Iterations | Time (ms) | No. Iterations |
| 17 | 0.40 | 2 | 12.6 | 383 |
| 33 | 0.86 | 2 | 137 | 1606 |
| 65 | 1.44 | 1 | 2.05 E3 | 6709 |
| 129 | 5.44 | 1 | 3.36 E4 | 27980 |
| 257 | 22.8 | 1 | 6.05 E5 | 116397 |
| 513 | 109 | 1 |  |  |
| 1025 | 467 | 1 |  |  |
| 2049 | 2.22 E3 | 1 |  |  |
| 4097 | 1.22 E4 | 1 |  |  |
| 8193 | 1.45 E5 | 1 |  |  |

Table 2. Alpha effect on iteration numbers of two methods at dimension 33

|  |  |  |
| --- | --- | --- |
| Alpha | Vcycle | Itercycle |
| 0.1 | Diverge | 30562 |
| 0.2 | Diverge | 14477 |
| 0.3 | Diverge | 9115 |
| 0.4 | 2 | 6434 |
| 0.5 | 2 | 4825 |
| 0.6 | 2 | 3752 |
| 0.7 | 2 | 2986 |
| 0.8 | 2 | 2411 |
| 0.9 | 2 | 1964 |
| 1.0 | 2 | 1606 |
| 1.1 | 2 | 1313 |
| 1.2 | 2 | 1068 |
| 1.3 | 3 | 860 |
| 1.4 | 3 | 682 |
| 1.5 | 5 | 527 |
| 1.6 | 7 | 389 |
| 1.7 | 15 | 265 |
| 1.8 | Diverge | 140 |
| 1.9 | Diverge | 177 |
| 2.0 | Diverge | Not converge |

Note that since one Vcycle contains many Itercycles, it is not obvious to compare iteration numbers of both methods but total computing time.