3)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A type: | Full | Full | Full | Sparse |
| Solve method: | Evil inverse | GE scheme | A\f | A\f |
| Time (s): | 0.1 | 15.27 | 0.021 | 0.000056 |

b) n=1000

n=2000

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A type: | Full | Full | Full | Sparse |
| Solve method: | Evil inverse | GE scheme | A\f | A\f |
| Time (s): | 0.695 | 133.65 | 0.114 | 0.000082 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A type: | Full | Full | Full | Sparse |
| Solve method: | Evil inverse | GE scheme | A\f | A\f |
| Time (s): | 8.27 | >25 min. | 1.6494 | 0.000206 |

n=5000

For set n, sparse backslash is fastest, then full backslash, then full evil inverse and the slowest one is the full Gaussian Elimination Scheme.

As n increases, it seems like sparse backslash time increase linearly, and full backslash quadratically. The full evil inverse and especially the full GE scheme time increase much faster than n.