

Homework 1: Equations of motion and eigenvalue problem

Name: Abdelrahman Fathy Abdelhaleem Aly Abdelrahman

Matr.-Nr.: 108023251500

Stiffness Matrix:

10350	-3000
-3000	10350

Mass Matrix:

750	0
0	750

Task 7:

Forward Iteration:

eigen value: 17.799995

eigen vector: [0.707655, -0.706558]

number of iterations: 12

Inverse Iteration:

eigen value: 9.800001

eigen vector: [0.707409, 0.706805]

number of iterations: 13

Task 8:

Forward Iteration with initial guess [1.000000, 1.000000]:

eigen value: 9.800000

eigen vector: [0.707107, 0.707107]

number of iterations: 2