```
In(*):= k = 1.6 * 6.25
    m = (1 + 1.0 / 3.0) * 1.244 * 10^ - 3
    M = 1.244 * 10^ - 3
    Eigenvalues[{{k/m, -k/m, 0}, {-k/M, k/M, -k/M}, {0, -k/m, k/m}}]

Out(*):= 10.

Out(*):= 0.00165867

Out(*):= 0.001244

Out(*):= {16 930.1, 6028.94, -2862.6}

In(*):= \sqrt{(16930.12238926458`)}
    \sqrt{(6028.938906752408`)}
    \sqrt{(6028.938906752408`)}
    \sqrt{(-2862.5982735089474`)}

Out(*):= 130.116

Out(*):= 77.6462

Out(*):= 0. + 53.5033 i
```