M $\lfloor \not{0} \mid \overline{0} \rfloor$ armonico s+ oscilator:

$\ddot{\eta}_i = -\omega^2 A_j e^{i\omega t} = +\omega^2 \eta_i$ $\eta_j = A_j e^{i\omega t}$

(#1) $M_{ki} \ddot{\eta}_i + V_{kj} \eta_j = 0 \Rightarrow -M_{ki} \omega^2 \eta_i + V_{kj} \eta_j = 0$

$\Rightarrow \sum_i [-\omega^2 M_{ki} + V_{ki}] \eta_i = 0$ pura sol. dist. de trivial

$\det(-\omega^2 M_{ki} + V_{ki}) = 0$ $\cancel{V_{ki} = M_{ki} \frac{g}{l}}$

$\det([-\omega^2 + \frac{g}{l}] M_{ki}) = 0$

$\cancel{\det(M_{ki}) = 0 \quad or \quad \omega^2 = \frac{g}{l}}$