- $m\ddot{x} + b\dot{x} + kx = 0$ ($\beta = \frac{b}{2m}$, $\omega_0 = \sqrt{\frac{k}{m}}$)
- Let $\omega^2 = \beta^2 - \omega_0^2$
    1. underdamped: $\omega^2 < 0$
    2. critically damped: $\omega^2 = 0$
    3. overdamped: $\omega^2 > 0$