Classical Mechanics Problem - Damped driven oscillator

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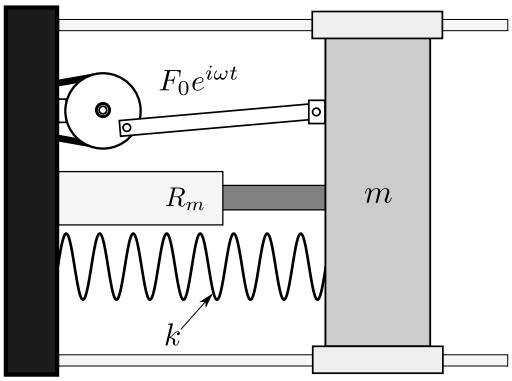
A damped driven oscillator,



is governed by the differential equation,

$$m\frac{d^2y}{dt^2} + R_m\frac{dy}{dt} + ky = F_0e^{i\omega t}.$$

Find the general analytical solution for this second order differential equation. Find the mechanical input impedence.