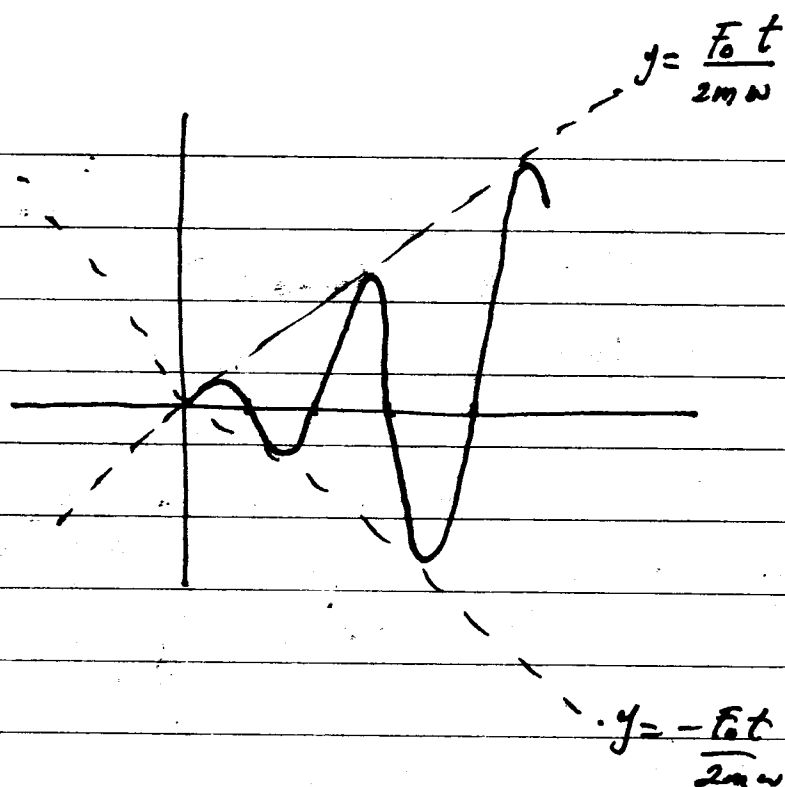




Under damped resonant case ($b^2 < 4mk$)

$$my'' + by' + ky = F_0 \cos \delta t$$

Recall

$$y_p(t) = \frac{F_0}{\sqrt{(k - m\delta^2)^2 + b^2\delta^2}} \sin(\delta t + \theta)$$

We seek to maximise

$$M(\delta) = \frac{1}{\sqrt{(k - m\delta^2)^2 + b^2\delta^2}}$$