



$$m=1\text{kg}, b=3\text{N}\cdot\text{s}/\text{m}, k=2\text{N}/\text{m}$$

$$t=0 \quad x(0)=0,1\text{m}$$

$$\dot{x}(0)=0,05\text{m/s}$$

$$m\ddot{x} + b\dot{x} + kx = 0$$

$$m [L^2 x(0) - s x(0) - \dot{x}(0)] + b [L x(0) - x(0)] + k x(0) = 0$$

$$(m\omega^2 + b\omega + k) x(0) = m x(0)\omega + m \dot{x}(0) + b x(0)$$

$$x(0) = \frac{0,1s^2 + 0,35s}{1\omega^2 + 3\omega + 2} \cdot \frac{1}{s}$$