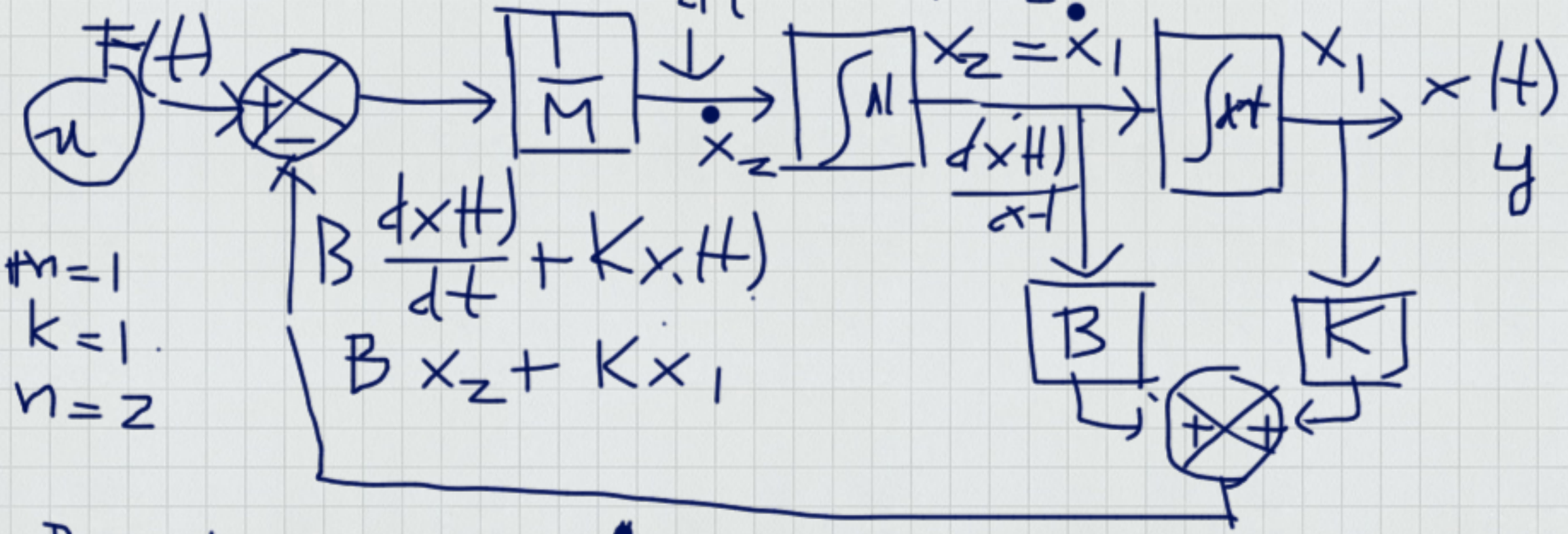
Model Ruang Keadaan

Hukum Newton : $\frac{d^2x(t)}{dt^2} = \frac{1}{M}\left[F(t) - \left(B\frac{dx(t)}{dt} + Kx(t)\right)\right]$



m = 1
k = 1
n = 2

Pers. keadaan :

$$\dot{x}_1 = x_2$$

$$\dot{x}_2 = \frac{d^2x(t)}{dt^2} = \frac{1}{M}\left[u - \left(Bx_2 + Kx_1\right)\right]$$

$$= -\frac{K}{M}x_1 - \frac{B}{M}x_2 + \frac{1}{M}u$$

Pers. keluaran

$$y = x_1$$