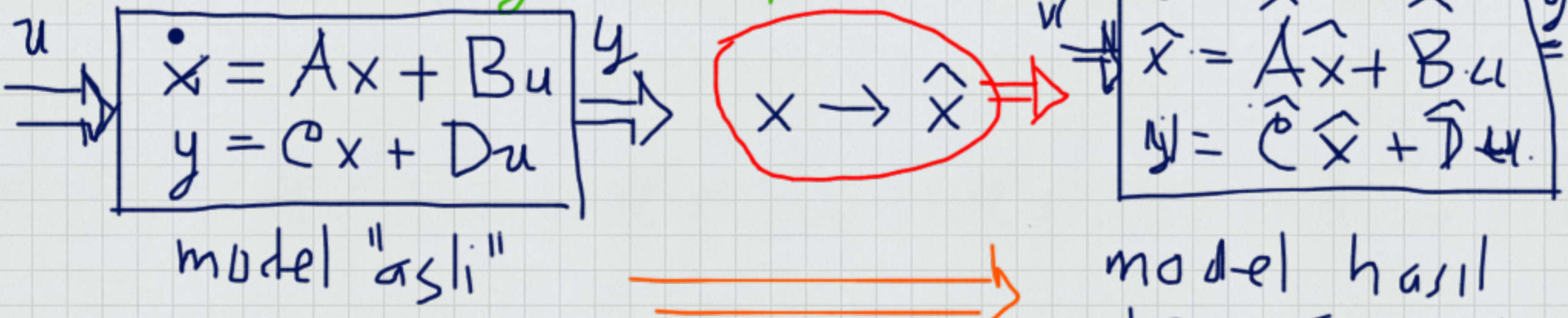
* TRANSFORMASI SIMILARITAS

(Similarity Transformation)



model "asli"

model hasil transformasi

Ambil sembarang matrix T (non-singular, determinannya $\neq 0$, memiliki inverse T^{-1})

Tentukan peubah keadaan $\hat{x} = Tx$ $\quad T\,[n \times n]$

$x = T^{-1}\hat{x}$ $\quad TT^{-1} = T^{-1}T = I$

$T^{-1}\dot{\hat{x}} = AT^{-1}\hat{x} + Bu \qquad y = CT^{-1}\hat{x} + Du$

$TT^{-1}\dot{\hat{x}} = TAT^{-1}\hat{x} + TBu \longrightarrow \dot{\hat{x}} = TAT^{-1}\hat{x} + TBu$