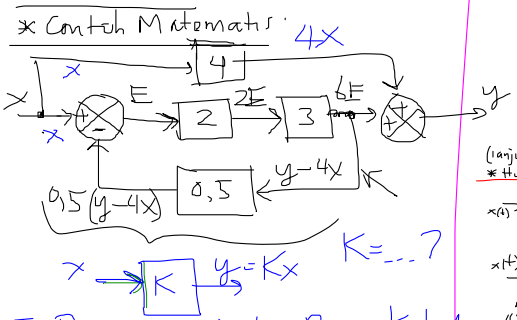
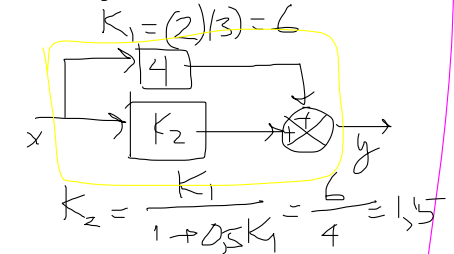


Contoh



I. Dengan Aljabar Bagas Kotak

Hubungan Serial



Hubungan umpan-maju

$K = K_2 + 4 = 1.5 + 4 = 5.5$

II. Percobaan & Persamaan

$E = x - 0.5(y - 4x)$

$= x - 0.5y + 2x$

$= 3x - 0.5y$

$y - 4x = 6E$

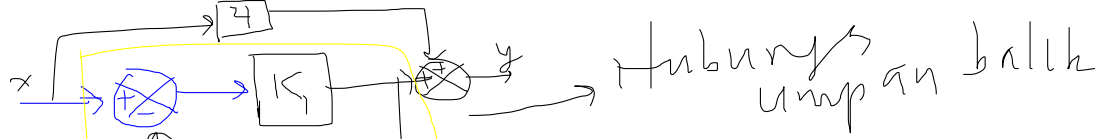
$= 6[3x - 0.5y]$

$= 18x - 3y$

$y + 3y = 18x + 4x$

$4y = 22x \rightarrow y = \frac{22}{4}x = 5.5x$

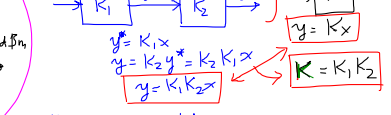
$K = 5.5$



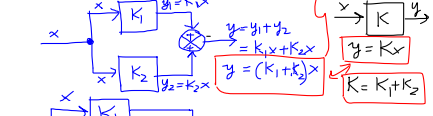
* Aljabar Bagas Kotak

(Block Diagram Algebra)

* Hubungan serial (cascade)



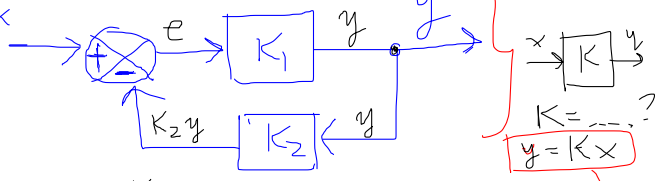
* Hubungan paralel



Hubungan umpan-maju (feed-forward)

* Hubungan umpan-balik (feedback)

umpan balik negatif



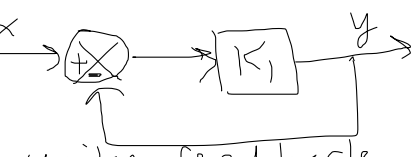
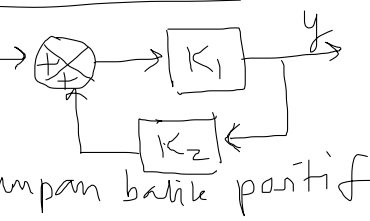
$E = x - K_2y$

$y = K_1E = K_1[x - K_2y] = K_1x - K_1K_2y$

$y + K_1K_2y = K_1x$

$[1 + K_1K_2]y = K_1x \rightarrow y = \frac{K_1}{1 + K_1K_2}x$

Cari sendiri!



umpan-balik satuan negatif ($K_2 = 1$)