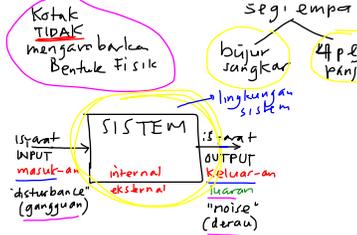


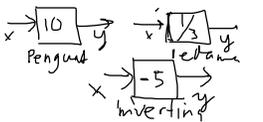
*** Representasi PROSES/SISTEM**

Dalam Bagan Kotak, **SISTEM/PROSES** di-representasi-Kan dgn **KOTAK**

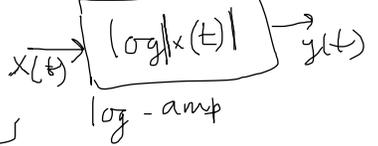


*** Operasi Matematika**

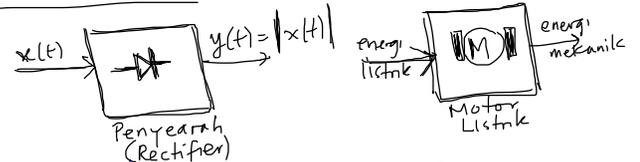
* Kata & kalimat
* Huruf dan angka
 $x(t) \rightarrow \int dt \rightarrow y(t) = \int x(t) dt$ integrator
 $x \rightarrow K \rightarrow y = Kx$
 $K > 1 \rightarrow$ Penguat/Amplifier
 $0 < K < 1 \rightarrow$ Redaman/Attenuator
 $K < 0 \rightarrow$ Penguat membalik (inverting amplifier)



$x(t) \rightarrow \frac{d}{dt} \rightarrow y(t) = \frac{dx(t)}{dt}$



*** Simbol Khusus**

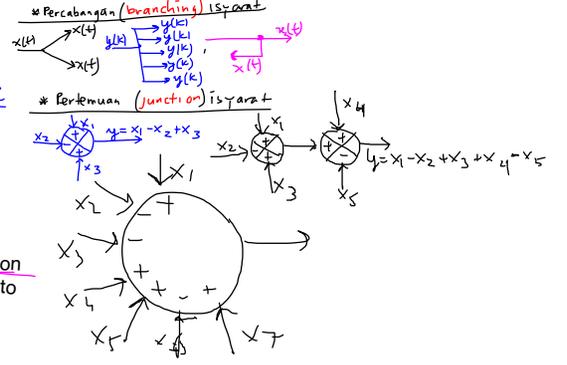


*** Notasi Isyarat**

* Berupa kata-kata/kalimat
* Berupa fungsi
 $x(t)$ = isyarat x yang berubah dgn t
 $y(k)$ = isyarat y yang berubah dgn k sekuen $k = 0, 1, 2, 3, \dots$

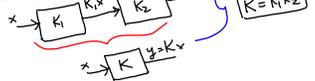
ω = radian per detik
 ω = omega
pangkal \rightarrow ujung
isyarat tunggal
isyarat majemuk

*** Percabangan dan Pertemuan ISYARAT**

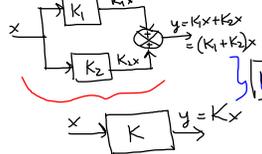


*** ALJABAR BAGAN KOTAK**
Block Diagram Algebra

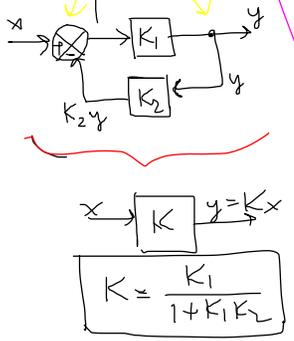
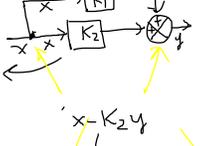
*** Hubungan serial (cascado)**



*** Hubungan paralel**



*** Hubungan umpan maju (feed forward)**



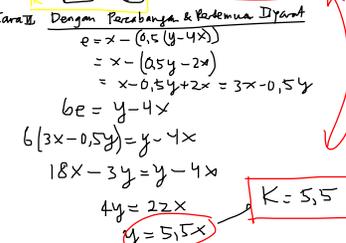
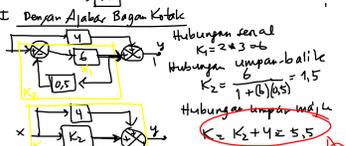
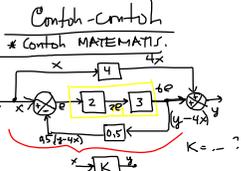
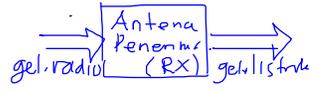
*** Hubungan umpan-balik (feedback)**

$y = K_1[x - K_2y]$
 $y = K_1x - K_1K_2y$
 $y + K_1K_2y = K_1x$
 $(1 + K_1K_2)y = K_1x$
 $y = \frac{K_1}{1 + K_1K_2}x$

Analisis Isyarat dan Sistem
3 Isyarat
3 Sistem
* Representasi SISTEM \rightarrow Bagan Kotak
* Menganalisa SISTEM \rightarrow ID Mekanik
* Memahami SISTEM \rightarrow 3 Mekanik
TEST I \rightarrow <http://www.uhass.ac.id/fk/12a/arsip/kuliah/>
TEST II \rightarrow Sistem Linier \rightarrow soal-soal

*** Pengertian SISTEM**
(Oppenheim, et al.)

A system can be viewed as any process that results in the transformation of signals. Thus, a system has an input and an output which is related to the input through the system transformation.



SAMA!

$K = 5,5$