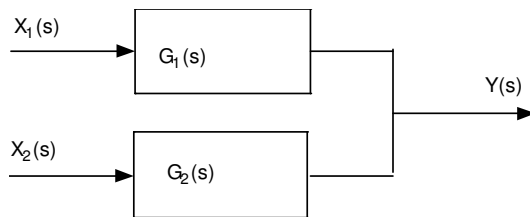
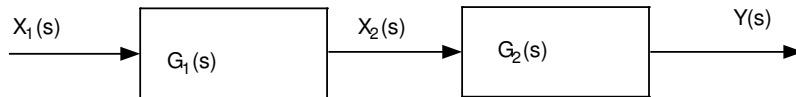


ChE 436
Properties of Transfer Functions

- A. Relate _____ input to _____ output.
- B. Represent an _____ relationship in s domain.
- C. Can be _____ to give the total system behavior.
- D. Convenient to use with _____ diagrams.
- E. Require initial conditions to be _____. (use _____ variables)
- F. Additive property (parallel process)



- G. Multiplicative property (series process)



- H. _____ is the limit of $G(s)$ as s approaches 0 (for a unit step change) when the _____ exists (see pg. 84).

- I. Find the gain for the following transfer functions:

$$G_1(s) = \frac{1}{\tau s + 1}$$

$$G_1(s) = \frac{a + bs}{\tau s + 1}$$

$$G_2(s) = \frac{8 + 2s}{(s + 3)(s + 2)}$$