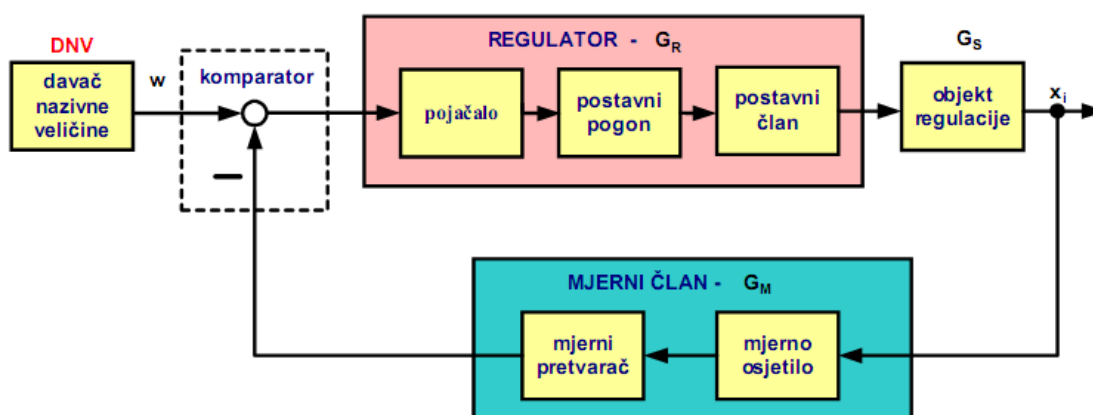
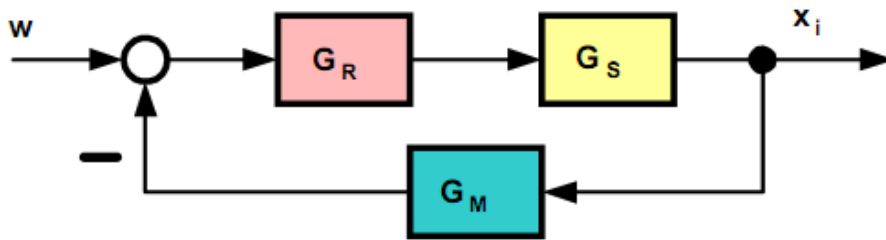


Blokovska algebra

BLOK-DIJAGRAM REGULACIJSKOG KRUGA





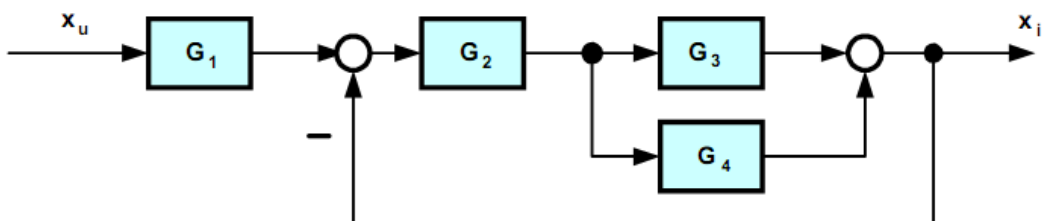
$$G(s) = \frac{x_i}{w(s)} = \frac{G_R G_S}{1 + G_R G_S G_M} \quad G_O = G_R G_S G_M$$

- Za $G_M=1$ (mjerni član zanemarive dinamike) vrijedi:

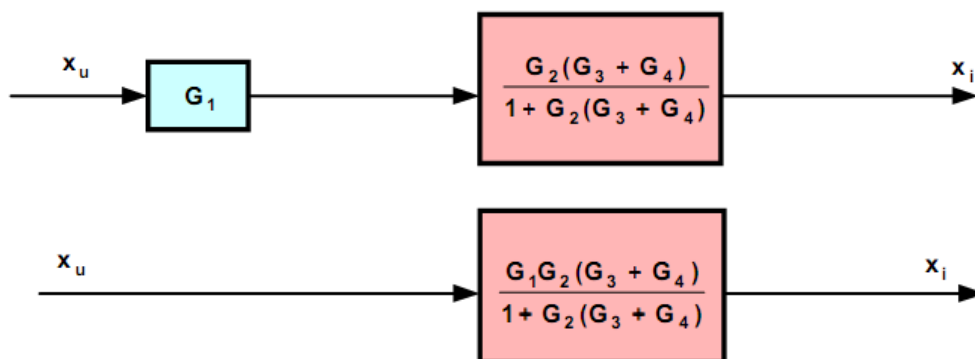
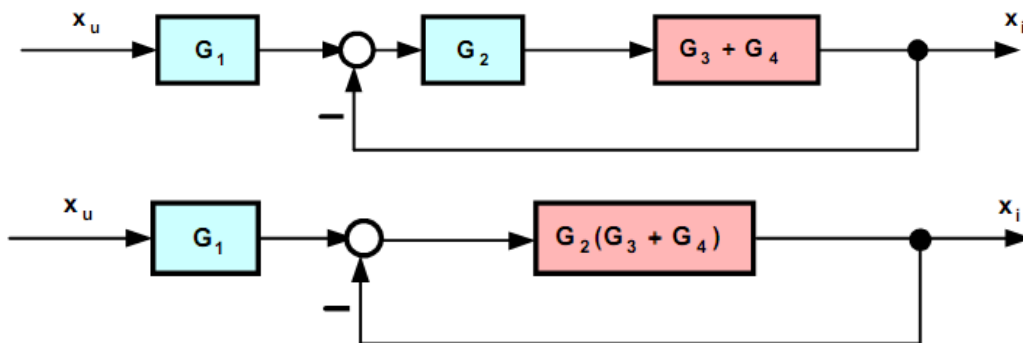
$$G_O = G_R G_S \quad G(s) = \frac{x_i}{w(s)} = \frac{G_R G_S}{1 + G_R G_S} = \frac{G_O}{1 + G_O}$$

PRIMJER 1.

- Upotrebom pravila blokovske algebre, odredite prijenosnu funkciju za zadani regulacijski krug



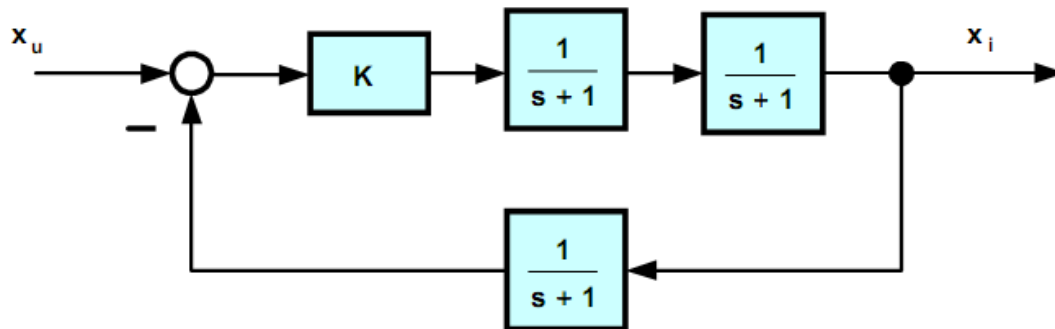
Rješenje



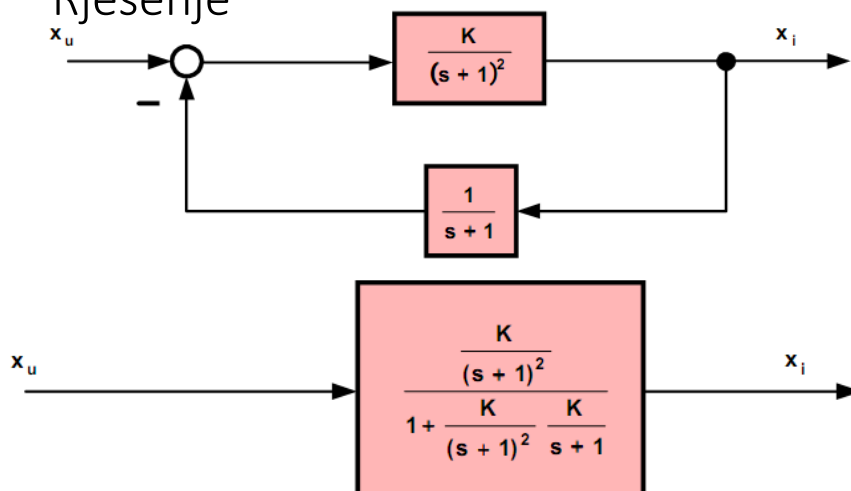
$$G(s) = \frac{x_i(s)}{x_u(s)} = \frac{G_1 G_2 (G_3 + G_4)}{1 + G_2 (G_3 + G_4)}$$

PRIMJER 2.

- Upotrebom pravila blokovske algebre, odredite prijenosnu funkciju za zadani regulacijski krug



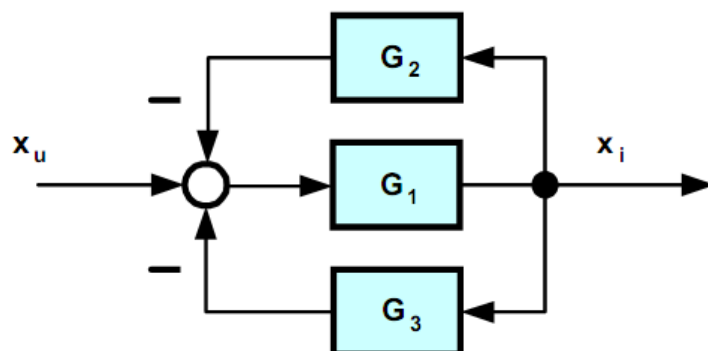
Rješenje



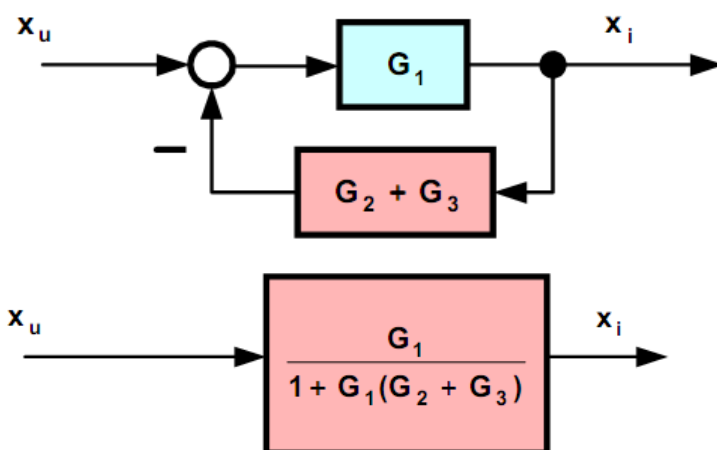
$$G(s) = \frac{x_i(s)}{x_u(s)} = \frac{K(s+1)}{s^3 + 3s^2 + 3s + 1 + K}$$

PRIMJER 3.

Upotrebom pravila blokovske algebre, odredite prijenosnu funkciju za zadani regulacijski krug

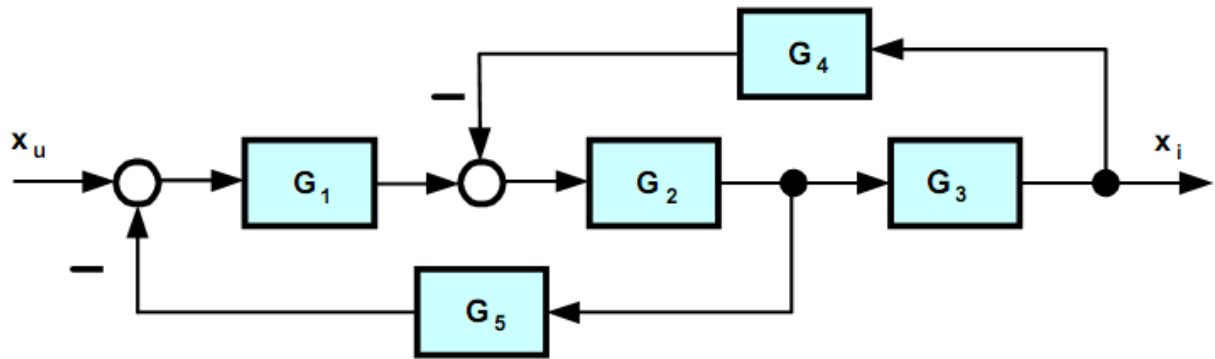


Rješenje



$$G(s) = \frac{x_i(s)}{x_u(s)} = \frac{G_1}{1 + G_1(G_2 + G_3)}$$

PRIMJER 4.



Rješenje

