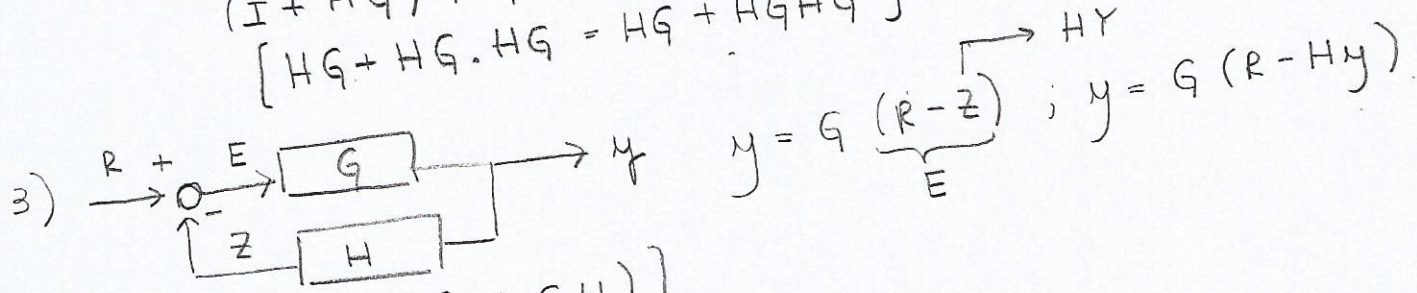
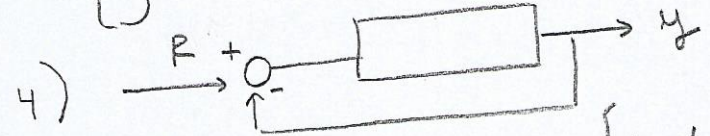


1) $(I+GH)^{-1}G = G(I+HG)^{-1}$
 $(I+GH) \cdot (I+GH)^{-1} G(I+HG) = (I+GH) \cdot G(I+HG)^{-1} \cdot (I+HG)$
 $G(I+HG) = (I+GH)G$
 $G + GHG = G + GHG \checkmark$

2) $Z = HG(R-Z); (I+GH)Z = HGR; Z = (I+GH)^{-1}HGR$
 $HG(I+GH)^{-1} = (I+HG)^{-1}HG$
 $(I+HG)HG = HG(I+GH)$
 $[HG + HG \cdot HG = HG + HGHG] \checkmark$

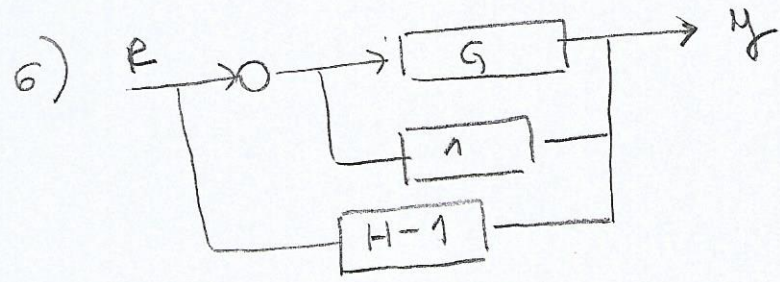
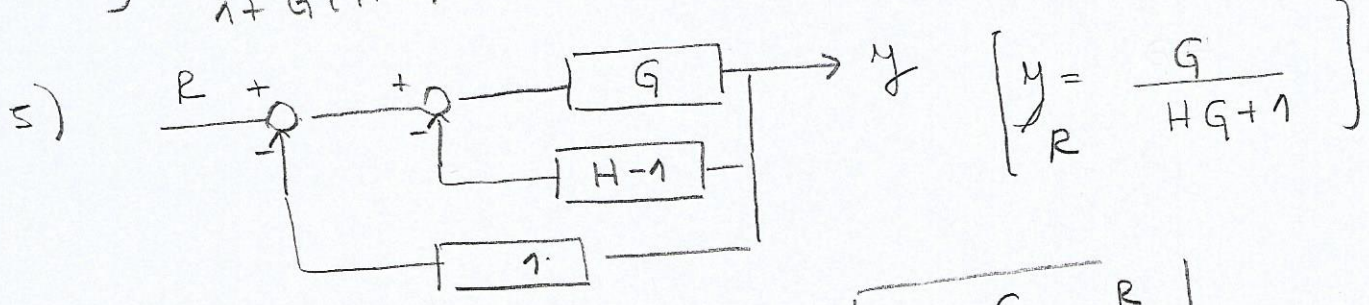


$[Y/R = G/(1+GH)]$

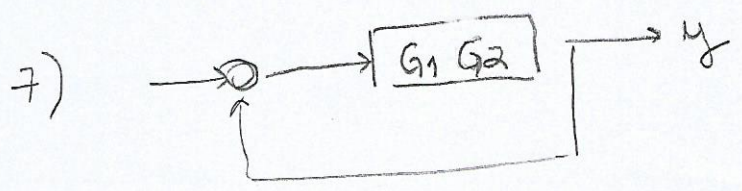


$Y = (R-Y) \frac{G}{1+G(H-1)}$

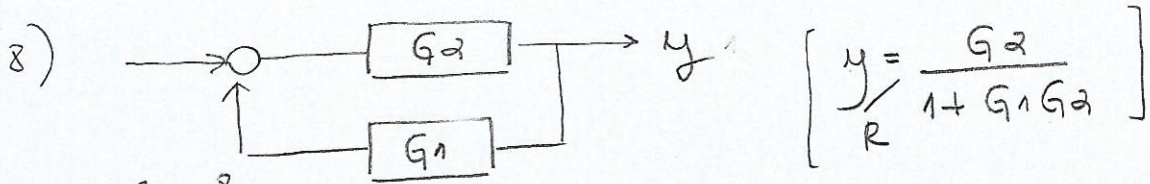
$Y = \frac{RG - YG}{1+G(H-1)} \rightarrow [Y/R = \frac{G}{1+GH}]$



$[Y = \frac{G}{HG+1} R]$



$[Y/R = \frac{G1 G2}{1+G1 G2}]$



9)
$$y = \underbrace{y_1}_R + \underbrace{y_2}_R = \frac{(G_1 + 1) G_2}{G_1 G_2 + 1}$$

10) $Z = W \pm X \pm Y$ (mesma função)

11)
$$y = \left[(R - Y H_3) G_1 + Y H_2 / G_4 \right] G_2 = \frac{G_3 G_4}{1 - G_3 G_4 H_1}$$

12)
$$y = (R - H_3 Y) G_1 \cdot \left[\frac{G_2 G_3 G_4}{1 - G_2 G_4 H_1 + G_2 G_3 H_2} \right]$$

13)
$$y | R = \frac{G_1 G_2 G_3 G_4}{1 - G_3 G_4 H_1 + G_2 G_3 H_2 + G_1 G_2 G_3 H_4 H_2}$$