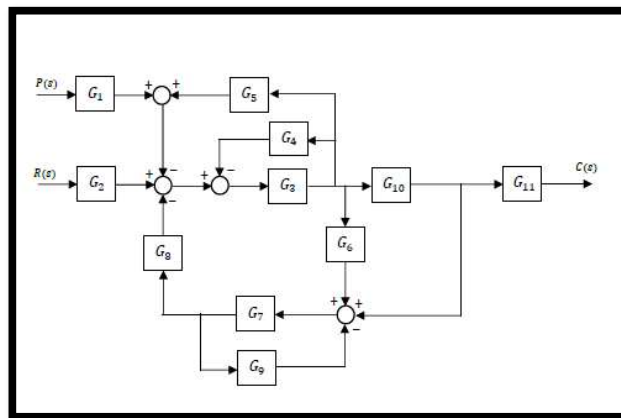


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SISTEMAS DINÁMICOS

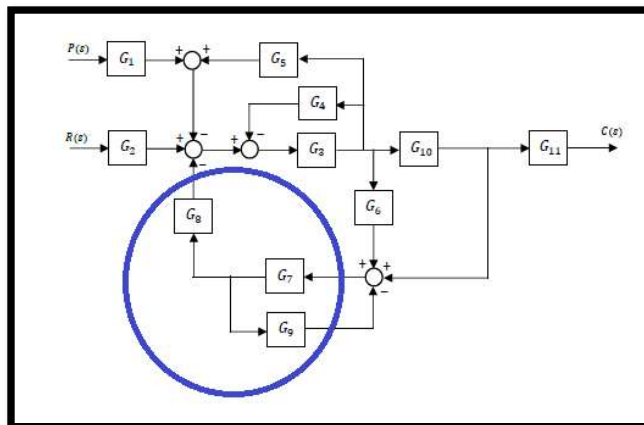
TALLER 1 – DIAGRAMAS DE BLOQUES.

Integrantes: Maydee Pérez, Cristian Daza, Edward Benachi, Oscar Arcos, Cristhian Torres.



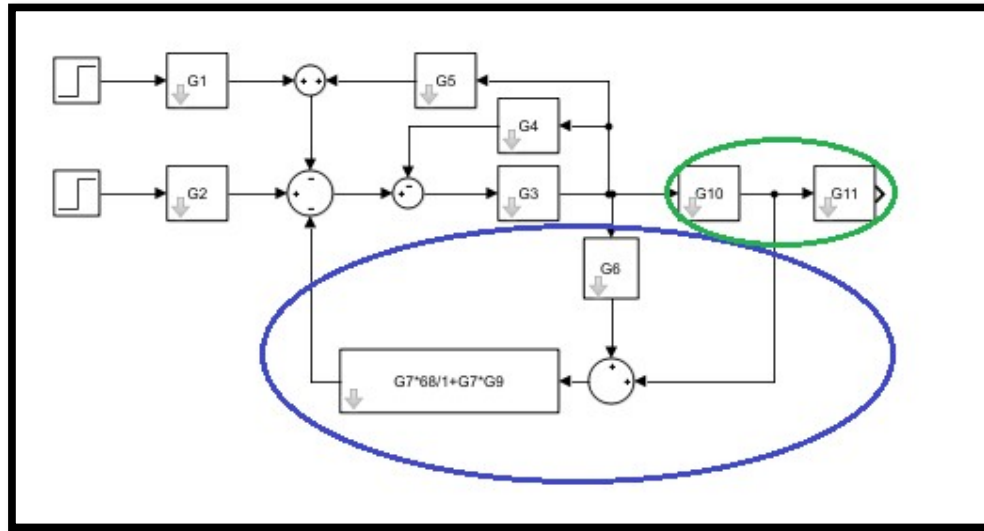
Solución.

1.



$$G8G7 * \frac{1}{1+G7G9} = \frac{G7G8}{1+G7G9}$$

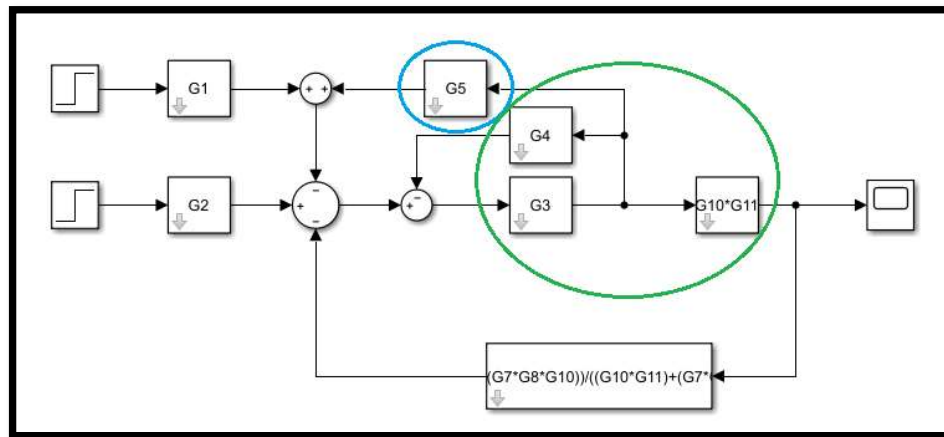
2.



$$\left(\frac{1}{G_{11}} + \frac{G_6}{G_{11}G_{10}} \right) * \frac{G_7G_8}{1 + G_7G_9} = \frac{G_{10} + G_6}{G_{10}G_{11}} * \frac{G_7G_8}{1 + G_7G_9} = \frac{G_6G_7G_8 + G_7G_8G_{10}}{G_{10}G_{11} + G_7G_9G_{10}G_{11}}$$

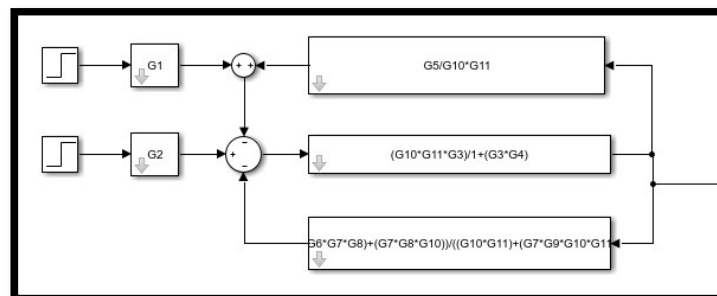
$$G_{10} * G_{11}$$

3.

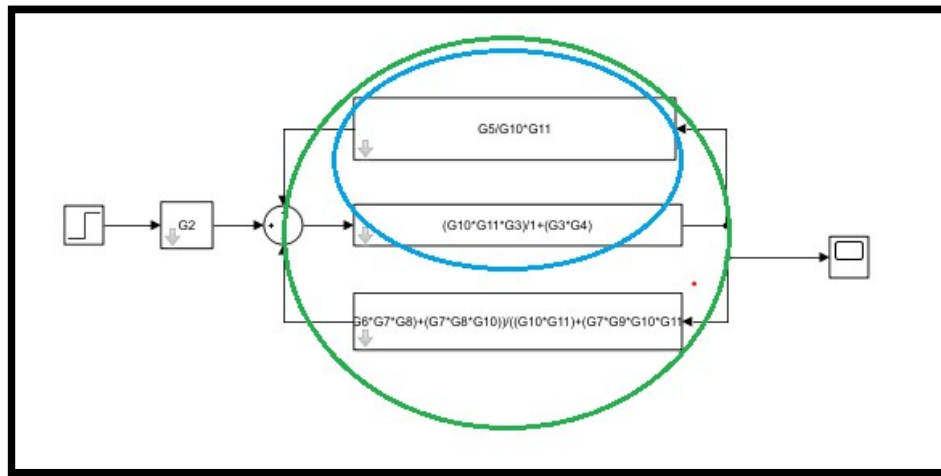


$$G_5 * \frac{1}{G_{10}G_{11}} = \frac{G_5}{G_{10}G_{11}}$$

$$\frac{G_3}{1 + G_3G_4} * G_{10}G_{11} = \frac{G_3G_{10}G_{11}}{1 + G_3G_4}$$



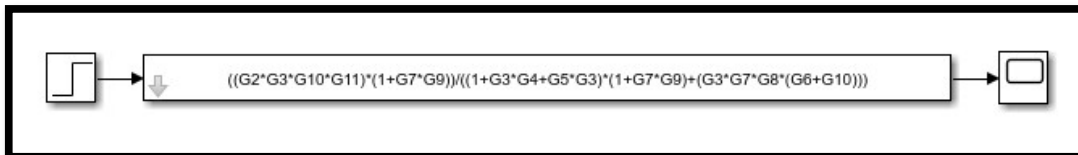
4. Superposición P(s)=0



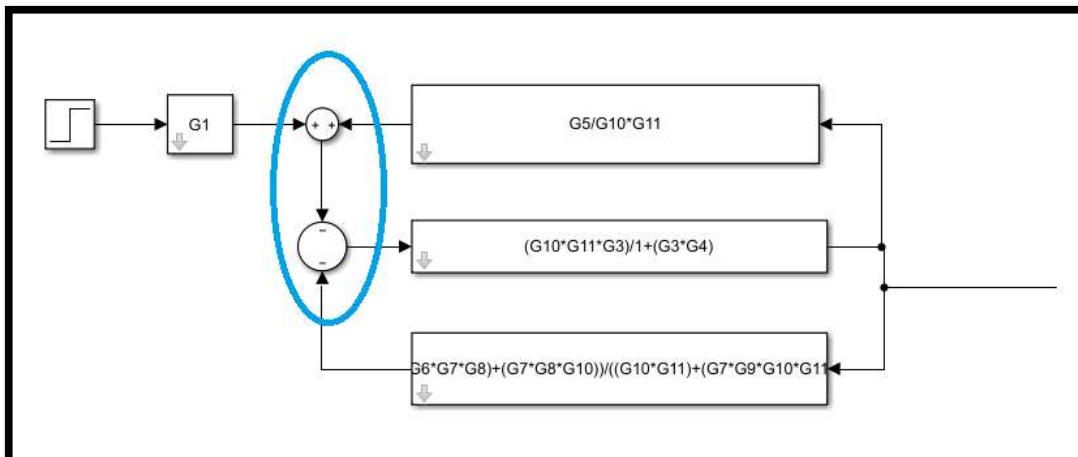
$$\frac{\frac{G3G10G11}{1+G3G4}}{1 + \frac{G3G10G11}{1+G3G4} * \frac{G5}{G10G11}} = \frac{G3G10G11}{1+G3G4+G5G3}$$

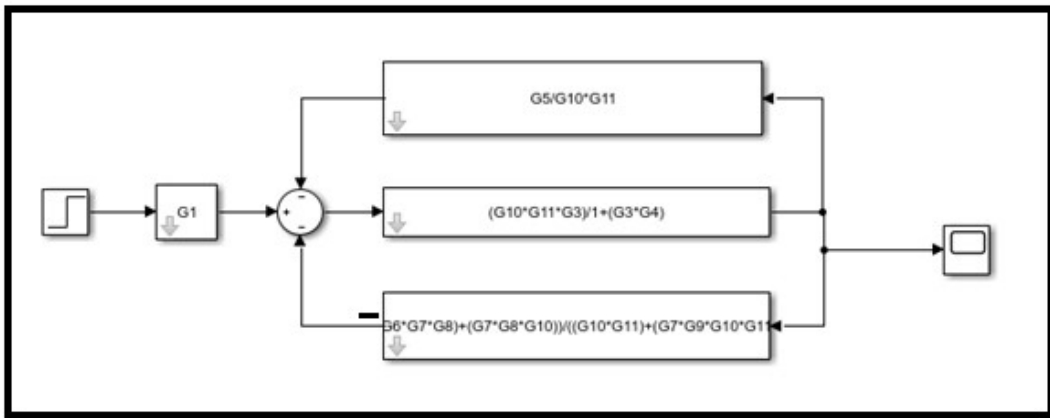
$$\frac{\frac{G3G10G11}{1+G3G4+G5G3}}{1 + \frac{G3G10G11}{1+G3G4+G5G3} * \frac{G6G7G8+G7G8G10}{G10G11+G7G9G10G11}} = \frac{G3G10G11(1+G7G9)}{(1+G3G4+G5G3)(1+G7*G9)+G3G7G8(G6+G10)}$$

$$G2 \frac{G3G10G11(1+G7G9)}{(1+G3G4+G5G3)(1+G7*G9)+G3G7G8(G6+G10)} = \frac{G2G3G10G11(1+G7G9)}{(1+G3G4+G5G3)(1+G7*G9)+G3G7G8(G6+G10)}$$



5. Superposición R(s)=0





$$G1 \frac{G3G10G11(1 + G7G9)}{(1 + G3G4 + G5G3)(1 + G7 * G9) + G3G7G8(G6 + G10)} = \frac{-G1G3G10G11(1 + G7G9)}{(1 + G3G4 + G5G3)(1 + G7 * G9) + G3G7G8(G6 + G10)}$$



SOLUCIÓN

