6.

$$\frac{10 \cdot (s+1)}{s^3 + 6s^2 + 8s + 15} = G(s)$$

verifique se o sistema é estável.

3	1	8	0
2	6	15	0
1	55	0	0
0	15	0	0

No change in sign of first column, therefore there are no real positive poles, the system is stable.