$$D_1(s) = s^5 + 2s^4 + 4s^3 + 6s^2 + 8s + 12$$

s^5	1	4	8
s^4	2	6	12
s^3	1	2	0
s^2	2	12	0
s^1	-4	0	0
s^0	12	0	0

- No estable
- 2 Cambios de signo → 2 polos RHP

$$D_2(s) = s^3 + 14s^2 + 55s + 42$$

s^3	1	55
s^2	14	42
s^1	52	0
s^0	42	0

Estable

$$D_3(s) = s^5 + 2s^4 + 3s^3 + 6s^2 + 5s + 3$$

s^5	1	3	5
s^4	2	6	3
s^3	0	7/2	0
s^2			
s^1			
s^0			

→ Caso especial I

a) ε

b) reciproco

a)

s^5	1	3	5
s^4	2	6	3
s^3	ε	7/2	0
s^2	$\frac{6\varepsilon - 7}{\varepsilon}$	3	0
s^1	a	0	0
s^0	3	0	0

$$a = \frac{\left(\frac{6\varepsilon - 7}{\varepsilon}\right)\left(\frac{7}{2}\right) - 3\varepsilon}{\frac{6\varepsilon - 7}{\varepsilon}}$$

$$= \frac{42\varepsilon - 49 - 6\varepsilon^2}{12\varepsilon - 14}$$

$\lim_{\varepsilon \to 0^-} \varepsilon \Rightarrow -$ | $\lim_{\varepsilon \to 0^+}$ (+)

$\lim_{\varepsilon \to 0^-} \frac{6\varepsilon - 7}{\varepsilon} +$ | $\lim_{\varepsilon \to 0^+}$ (−)

$\lim_{\varepsilon \to 0} a = \frac{-49}{-14} \Rightarrow +$

Inestable, 2 polos RHP

b)

S^5	3	6	2
S^4	5	3	1
S^3	21/5	7/5	0
S^2	4/3	1	0
S^1	-7/4	0	0
S^0	1	0	0

⇒ Inestable
2 polos RHP

//

$D_4(S) = S^5 + 7S^4 + 6S^3 + 42S^2 + 8S + 56$

S^5	1	6	8
S^4	7	42	56
S^3	0	0	0
S^2			
S^1			
S^0			

→ Caso especial II

-polinomio auxiliar

$7S^4 + 42S^2 + 56$

d/ds

$28S^3 + 84S$

S^5	1	6	8
S^4	7	42	56
S^3	28	84	0
S^2	21	56	0
S^1	28/3	0	0
S^0	56	0	0

→ Marginalmente estable

(no hay cambios de signo de S^4 a S^0)