

- Answer -

In-Class Assignment - 2

Make a routh table and tell how many roots of the following polynomial are in the rhp and in the lhp

$$P(s) = 3s^7 + 9s^6 + 6s^5 + 4s^4 + 7s^3 + 8s^2 + 2s + 6$$

s^7	3	6	7	2
s^6	9	4	8	6
s^5	4,67	10,4	0	0
s^4	-4,35	10,8	6	
s^3	12,9	10,6,42		
s^2	10,17	6		
s^1	-1,18	0		
s^0	6	10,6		

4 sign change 20 P

4 rhp 10 P

3 lhp 10 P

total roots

-2,78] lhp
-1,02 ± 0,65j	
0,64 ± 0,71j] rhp
0,03 ± 0,18j	