

The function analyzes the stability of a transfer function calculating poles signs and returns the Routh table of polynomial expression, also with parameters. It's ideal for exams. Now with a new algorithm for better intelligible results.

Example

Analyze the transfer function  $\frac{3 \cdot (1 + s)}{s^3 + 4 \cdot s^2 + 2 \cdot s + k}$

Enter `routh(fun_denom)`

F1	F2	F3	F4	F5	F6
Tools	Algebra	Calc	Other	Pr3mID	Clean Up
$\frac{3 \cdot (s + 1)}{s^3 + 4 \cdot s^2 + 2 \cdot s + k} \rightarrow tf$					
$\frac{3 \cdot (s + 1)}{s^3 + 4 \cdot s^2 + 2 \cdot s + k}$					
routh(getDenom(tf))					
MAIN	RAD AUTO	FUNC	1/230		

F1	F2	F3	F4	F5	F6
Tools	Algebra	Calc	Other	Pr3mID	Clean Up
$\begin{array}{r rr} 1 & 2 \\ 4 & k \\ \hline -(k-8) & 0 \\ 4 & 0 \\ \hline k & 0 \end{array}$					
routh(getDenom(tf))					
MAIN	RAD AUTO	FUNC	2/230		

You can now analyze k to have stability, store matrix etc.

This program has been already used many times without problems. If you finds any bug first assure you to have selected the English language in the mode and not to have translated the code with any program. If the problem persists please let me know.

For a better and faster answer please enclose some screenshot of the bug: entered inputs, expected outputs, error messages, erroneous code line, mode setting... it will help me very much!

My address is [paolosilingardi@interfree.it](mailto:paolosilingardi@interfree.it) . Thank you very much for your help!

Paolo Silingardi