

Linear Solver+

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This little program is part of a larger one called EZMAT available in this post. It uses RREF to solve Linear Equations. It is capable of Real and Complex numbers and will display the result as you see it in the 2nd and third screen below. It can also solve larger than 4x4 but the result so far is only displayed as in the 1st and 2nd screen since it is used less frequently in Electronics circuits which it is designed for.

$$\begin{aligned} \text{Solve:} \quad I1(6,14) - I2(2,6) + I3(0,0) &= 20v @ 0 \text{ deg.} & I1 &= a \\ -I1(2,6) + I2(7,-8) - I3(5,-8) &= 0 & I2 &= b \\ I1(0,0) - I2(5,-8) + I3(12,-8) &= 12v @ 0 \text{ deg.} & I3 &= c \quad \text{See below.} \end{aligned}$$

	1	2	3	4
1	(6,14)	(-2,-6)	0	20
2	(-2,-6)	(7,-8)	(-5,8)	0
3	0	(-5,8)	(12,-8)	12
4				

Edit More Go To Go → Cancel OK

	1
1	(1,-7E-1)
2	(2,1)
3	(2,6E-1)
4	

Edit More Go To Go → Cancel OK

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Terminal 19:28
a = (1.27,-0.70)
Polar = [1.45,-28.63]

b = (1.92,1.08)
Polar = [2.20,29.27]

c = (2.13,0.59)
Polar = [2.21,15.41]

Press [ENTER] to Continue...
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Enter the coefficients in Col 1, 2, 3 representing the Impedances. The 4th Col. represents the voltages.

Comments are appreciated at bernmich@bell.net