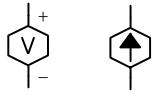


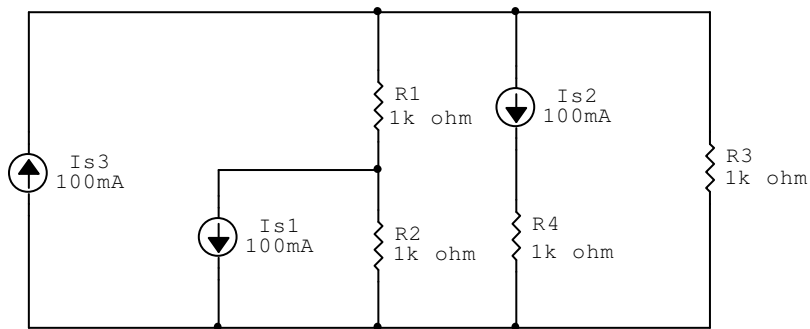
CURSO DE ENGENHARIA DE TELECOMUNICAÇÕES
Disciplina: Análise de Circuito I - CIE29002 - Turma:2070121 Prof.: Volney Duarte Gomes

Lista de Exercício IV – Análise Nodal



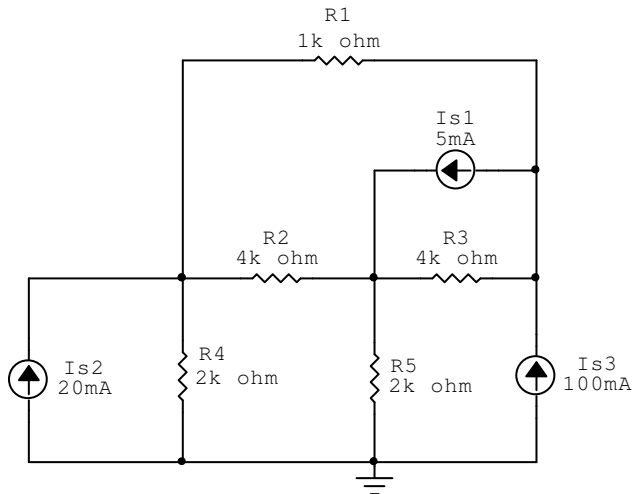
Fontes dependentes de tensão e corrente respectivamente

Questão 1 : Calcule as potências nas fontes, utilizando análise nodal.



circ nodal cc I R 01

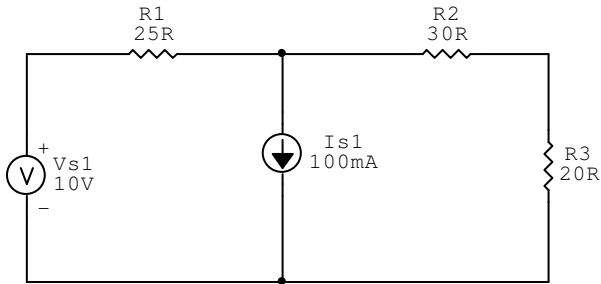
Circuito 1.1



circ nodal cc I R 02

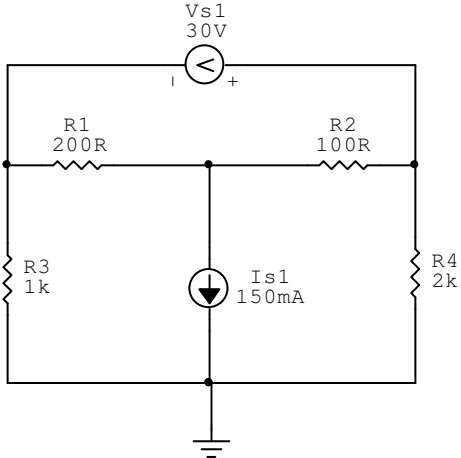
Circuito 1.2

Questão 2 : Calcule as potências nas fontes e nos resistores, utilizando análise nodal.



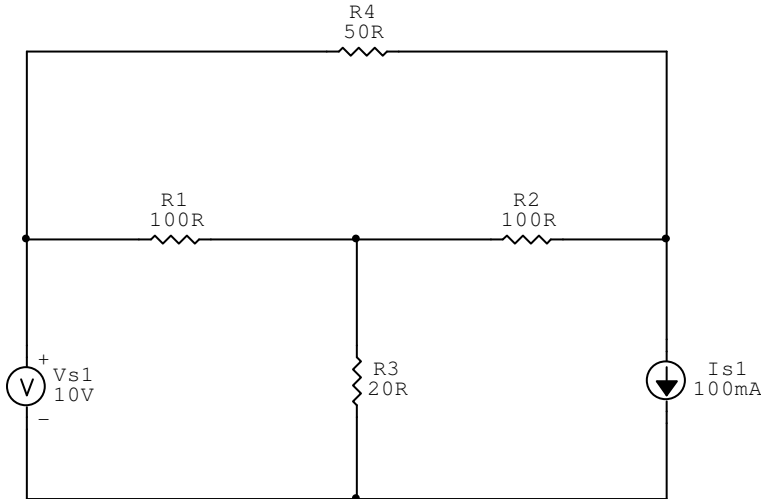
circ nodal cc V I R 03

Circuito 2.1



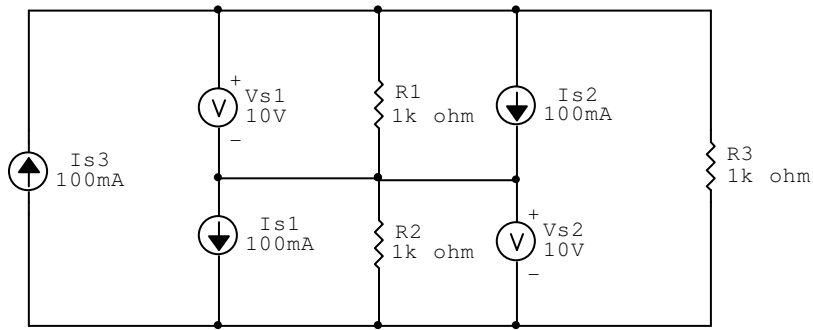
circ nodal cc V I R 04

Circuito 2.2



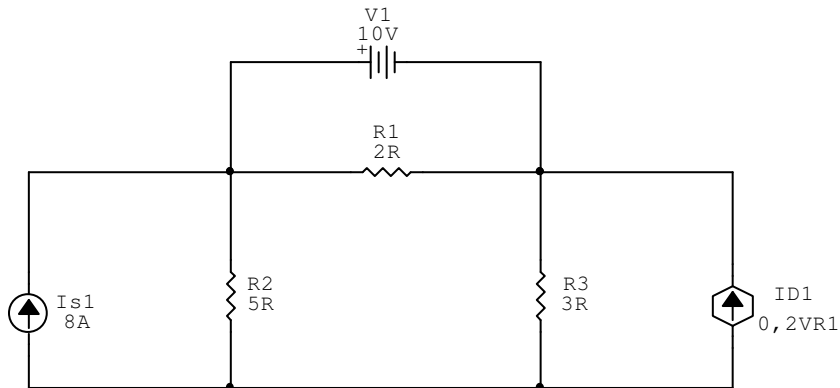
circ nodal cc V I R 02

Circuito 2.3



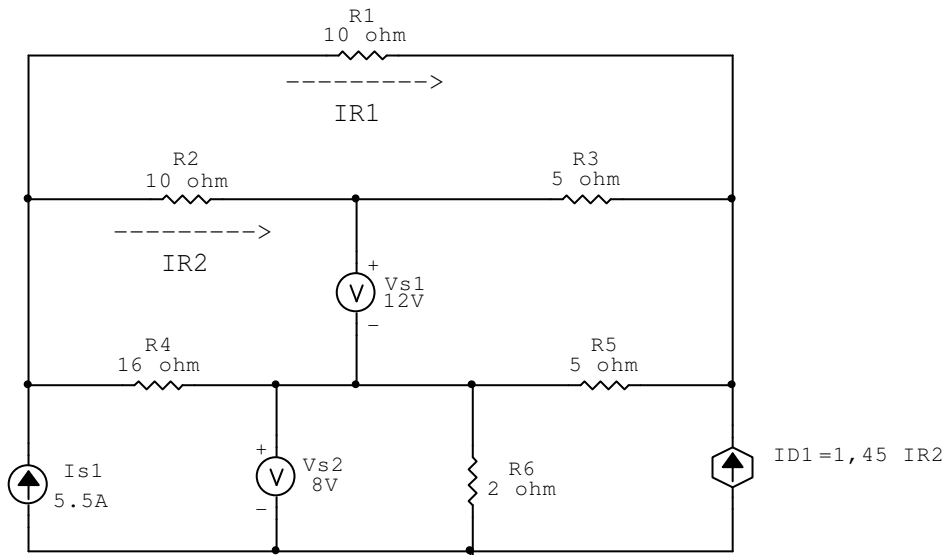
circ nodal cc V I R 10

Circuito 2.4



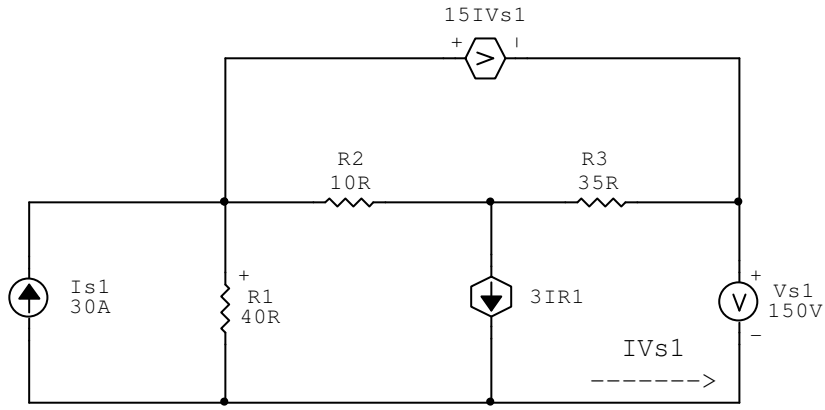
circ nodal cc fd R 07

Circuito 2.5



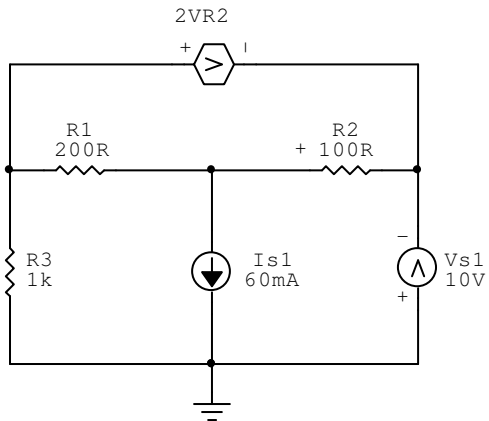
circ nodal cc fd R 03

Circuito 2.6



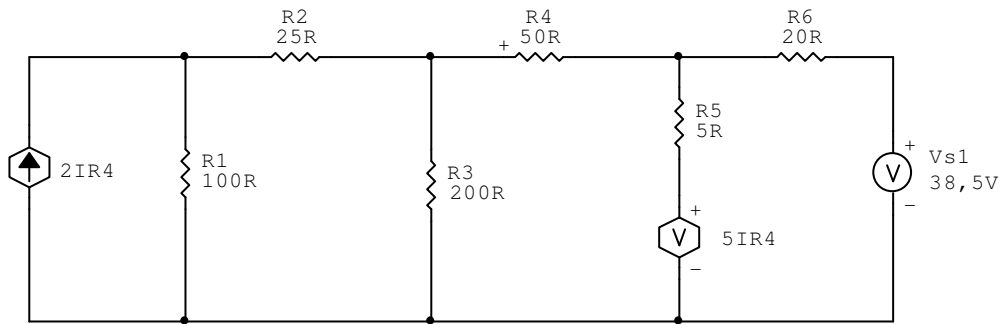
circ nodal cc fd R 10 -

Circuito 2.7



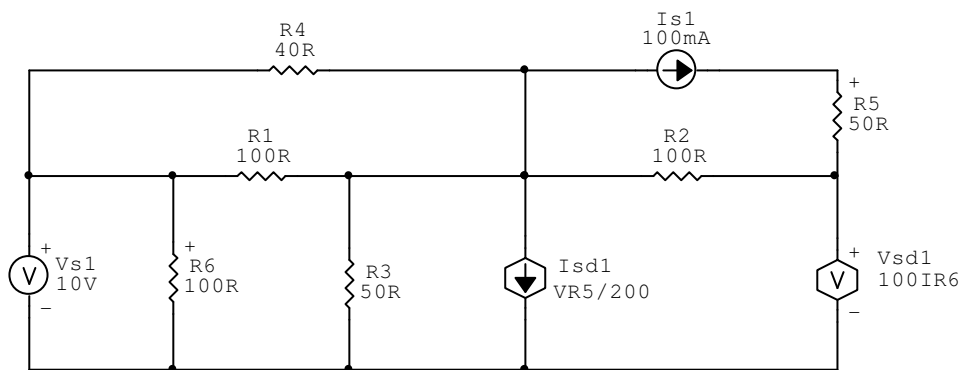
circ nodal cc fd R 05

Circuito 2.8



circ nodal cc fd R 08

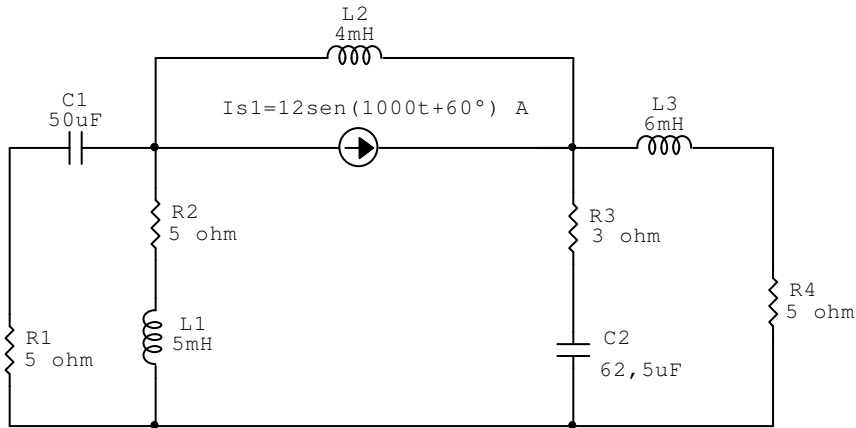
Circuito 2.9



circ nodal cc fd R 04

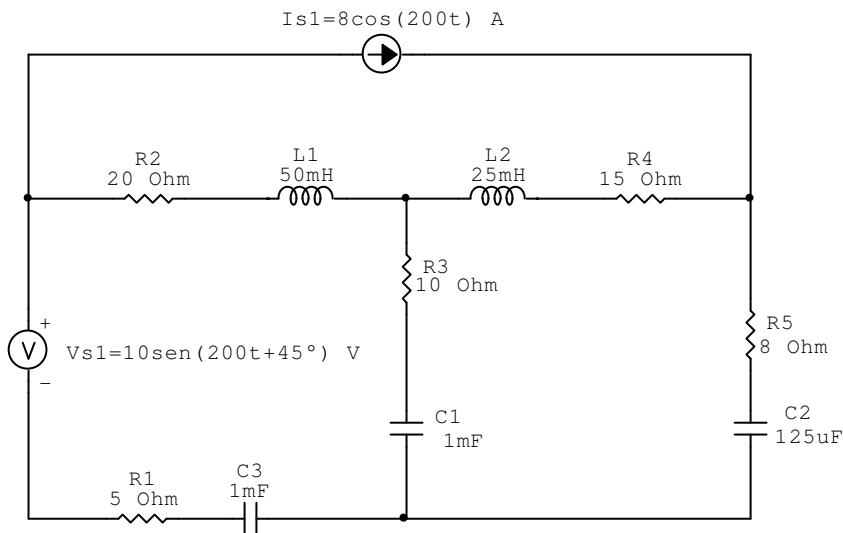
circuito 2.10

Questão 3): Nos circuitos a seguir, determine a tensão e a corrente nos ramos, no domínio do tempo. Utilize análise nodal e transformada fasorial.



circ nodal ca dom t i RLC 01

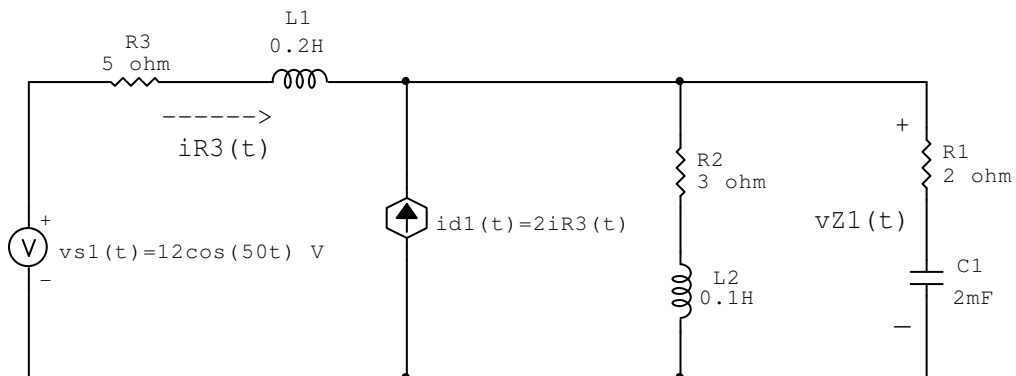
Circuito 3.1



circ nodal ca dom t v i RLC 01

Circuito 3.2

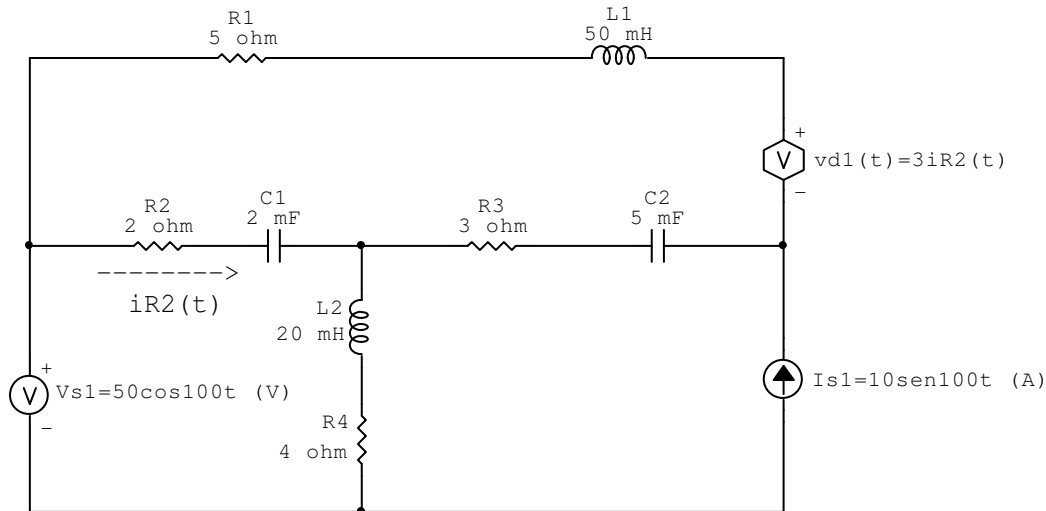
Questão 4): Determine a tensão $v_{Z1}(t)$, a corrente $i_{Z1}(t)$ e a potência complexa S_{Z1} . Utilize análise nodal e transformada fasorial.



circ nodal ca dom t fd 01

Circuito 4.1

Questão 5): Nos circuitos a seguir, determine a tensão e a corrente nas fontes, no domínio do tempo. Utilize análise nodal e transformada fasorial.

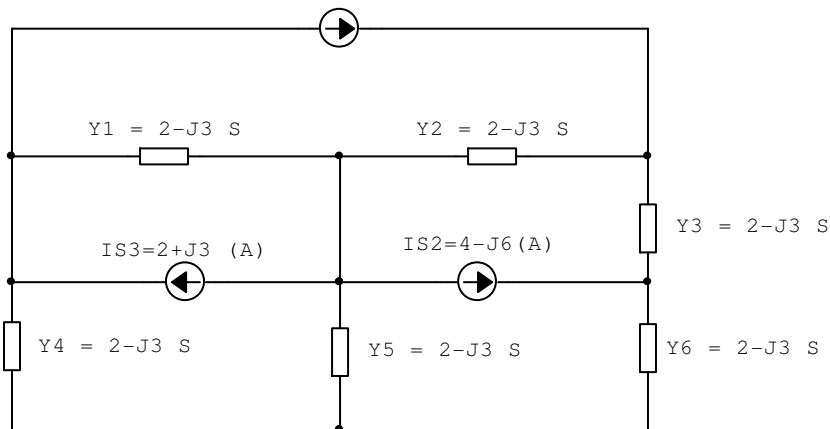


circ nodal ca dom t fd 02

Circuito 5.1

Questão 6): Utilizando análise nodal, obtenha o sistema de matrizes com as equações simultâneas.

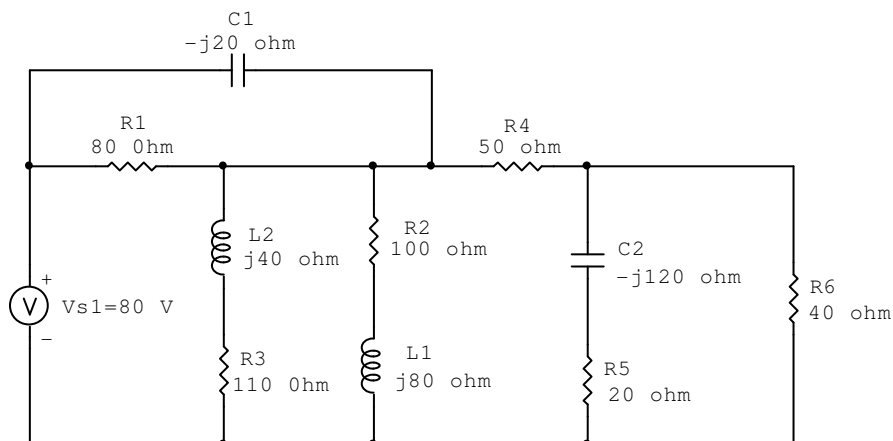
$$IS1=5+J1 \text{ (A)}$$



circ nodal ca dom f I Y insp 01

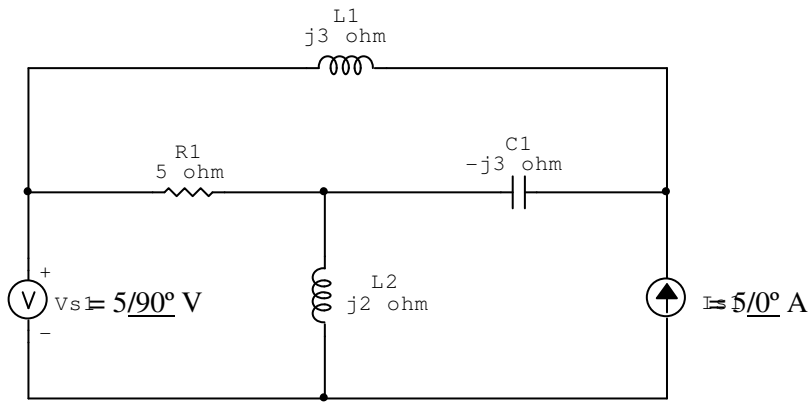
Circuito 6.1

Questão 7): Determine a tensão e a corrente no domínio da frequência e a potência complexa em todos os ramos. Utilize análise nodal.



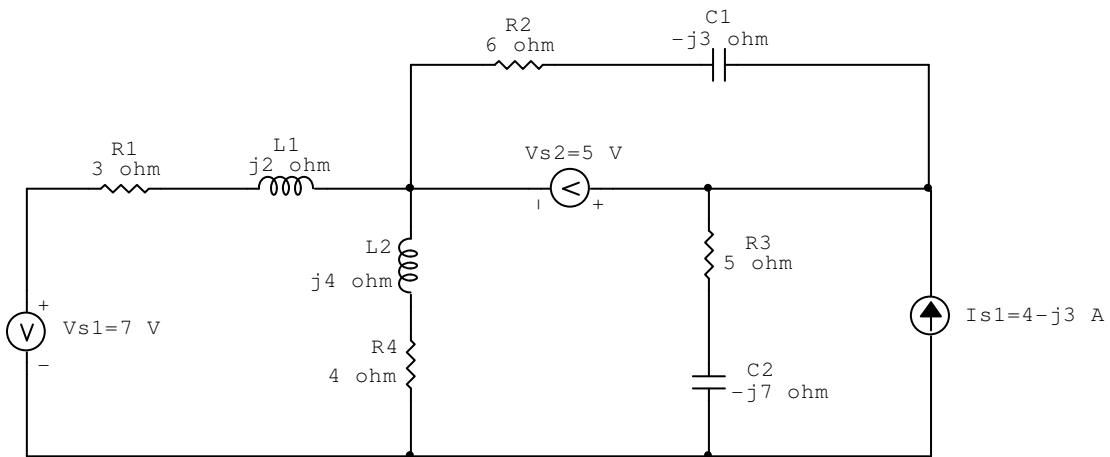
circ nodal ca dom f V Z 01

Circuito 7.1



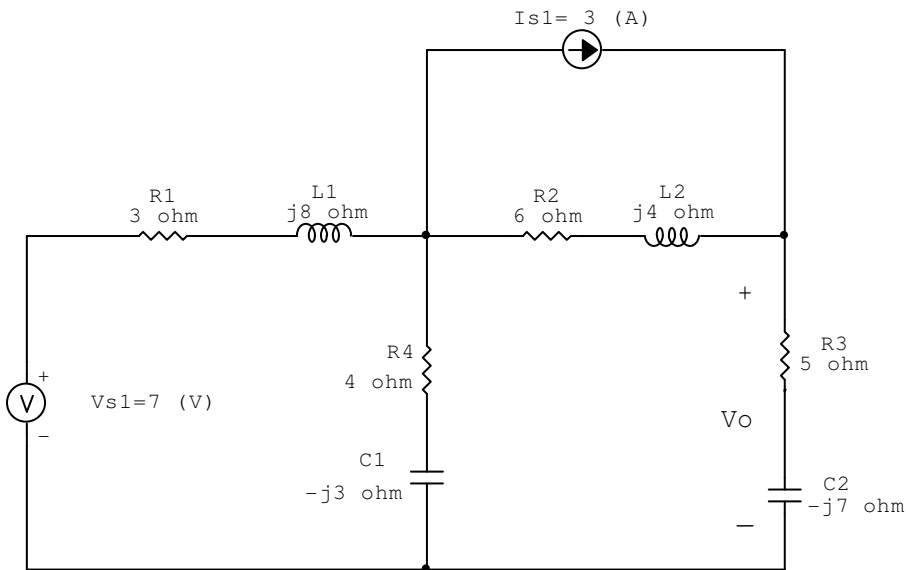
circ nodal ca dom f V I Z 01

Circuito 7.2



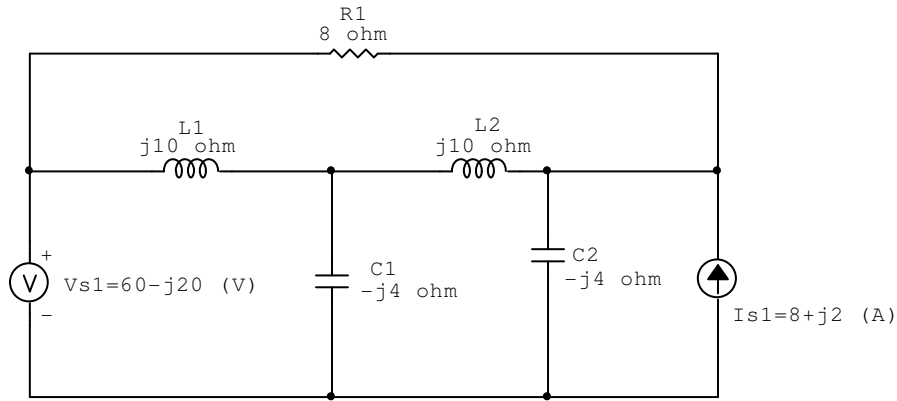
circ nodal ca dom f V I Z 02

Circuito 7.3



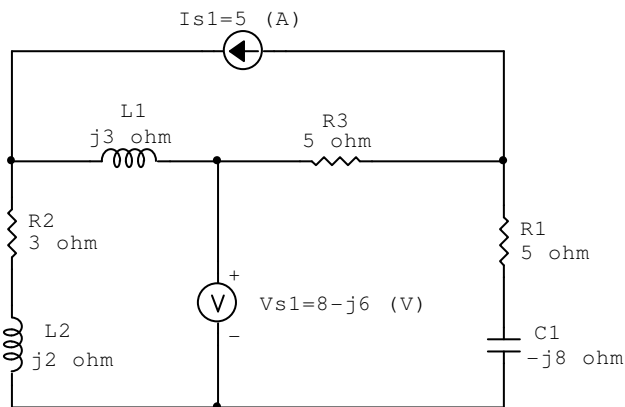
circ nodal ca dom f V I Z 04

Circuito 7.4



circ nodal ca dom f V I Z 05

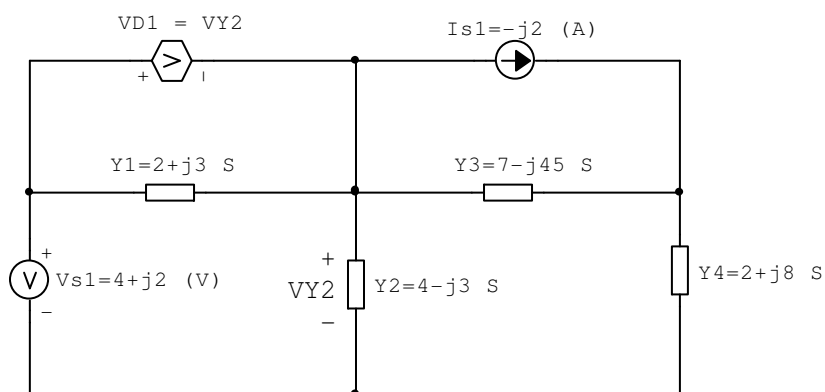
Circuito 7.5



circ nodal ca dom f V I Z 03

Circuito 7.6

Questão 8): Determine a tensão e a corrente no domínio da frequência e a potência complexa em todas fontes. Utilize análise nodal.



circ nodal ca dom f fd Y 01

Circuito 8.1