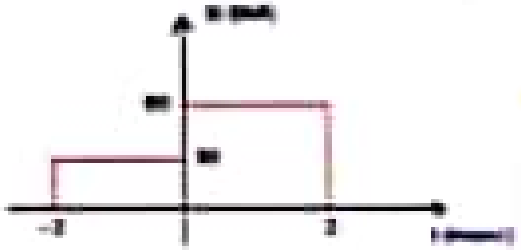
Question 3/14 (2 p.)

The plot shown in the figure depicts the current through a10 μF capacitor. Find the voltage across the capacitor $v_c(t=0)$, given that $v_c(t=-\infty)=0$.

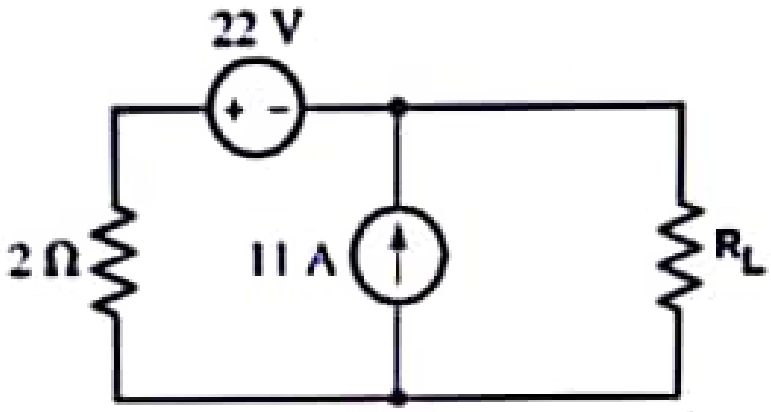


- 55 V
- None of the choices
- 3 V
- 60 V
- 6 V

SUBMIT ANSWER

Question 13/14 (2 p.)

Consider the circuit shown in the figure. What is the maximum power that can be absorbed by R_L from the circuit?

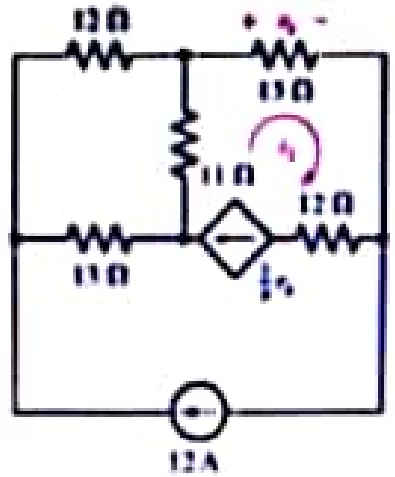


- 2 W
- 0 W
- None of the choices
- 3 W
- 1 W

SUBMIT ANSWER

Question 8/14 (2 p.)

What is the value of the current i_1 in the circuit given below?

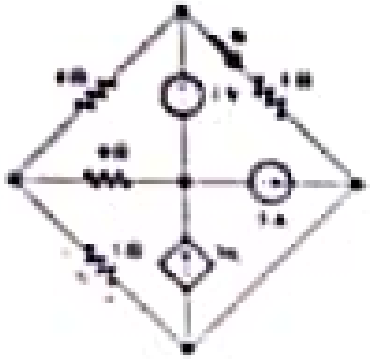


- 3.8 A
- -3.8 A
- None of the choices
- 3.2 A
- -3.2 A

SUBMIT ANSWER

Question 2/14 (2 p.)

Consider the circuit shown in the figure and find the contribution of the current source 3A only on the value of the current i_x

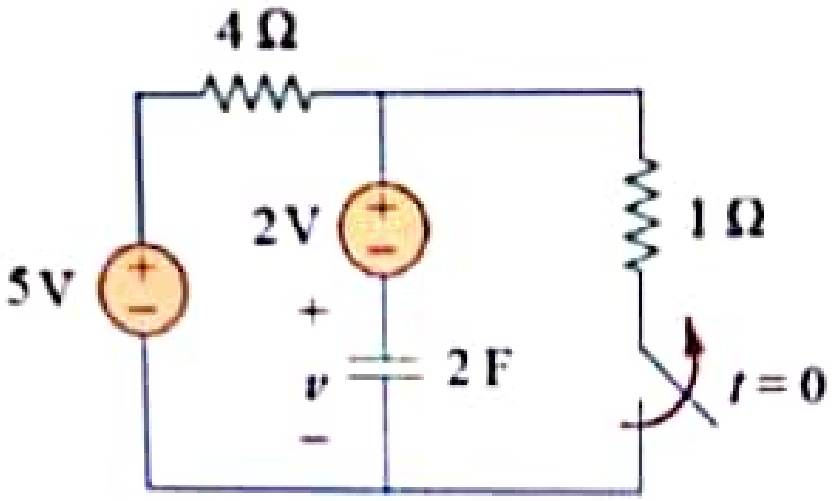


- -7/9 A
- -9/7 A
- None of the choices
- 9/7 A
- 7/9 A

SUBMIT ANSWER

Question 4/4 (2 p.)

Find the voltage across the capacitor at $t = 1$ s (i.e., $v(1)$)

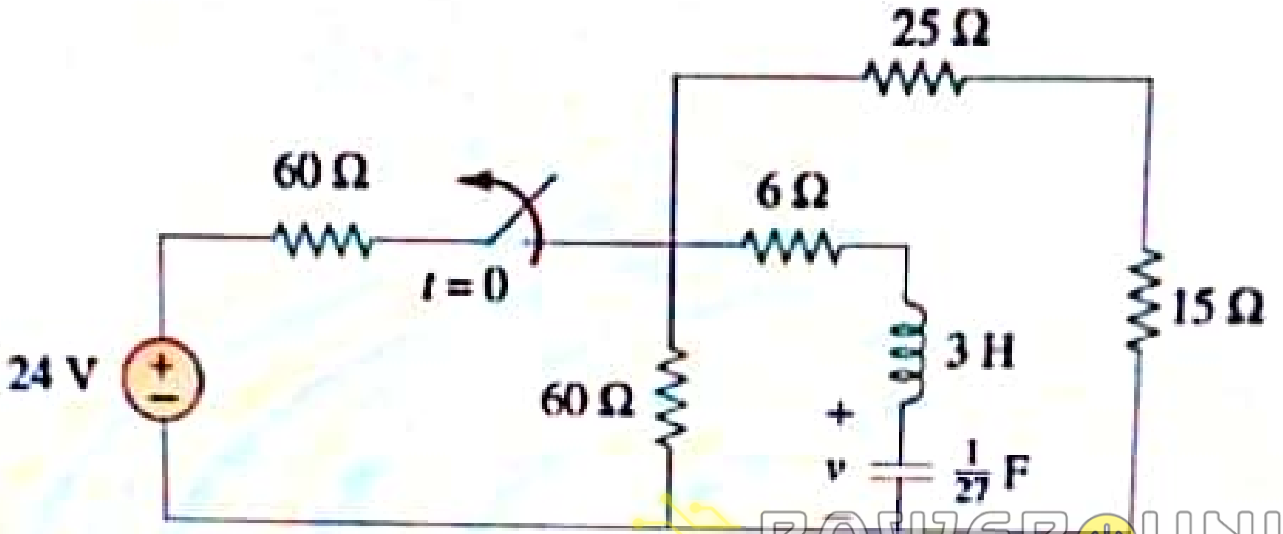


- 4.77V
- None of the choice
- −0.06V
- 0.53V
- −0.53V

SUBMIT ANSWER

Question 2/4 (2 p)

The circuit in the figure will produce

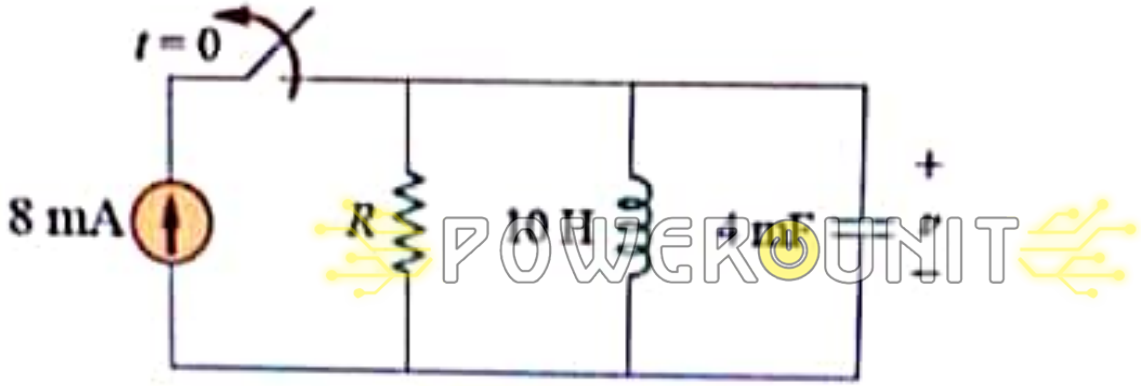


- An underdamped response
- A critically damped response
- None of the choices
- An undamped response
- An overdamped response

SUBMIT ANSWER

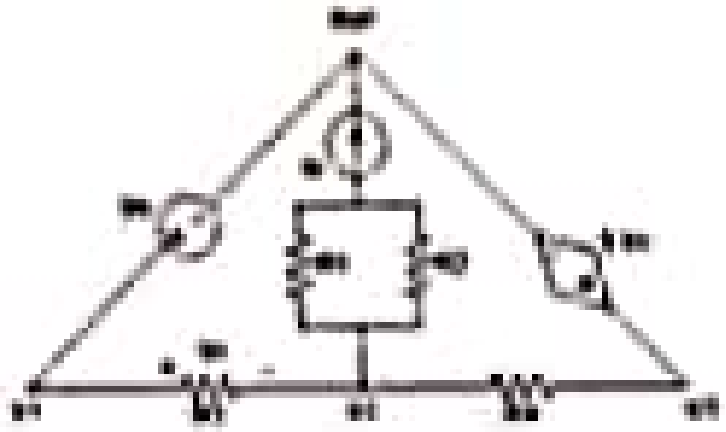
Question 3/4 [3 p.]

The value of the resistor R is adjusted such that the response is critically damped. Find the voltage across the capacitor $v(t)$, for $t > 0$



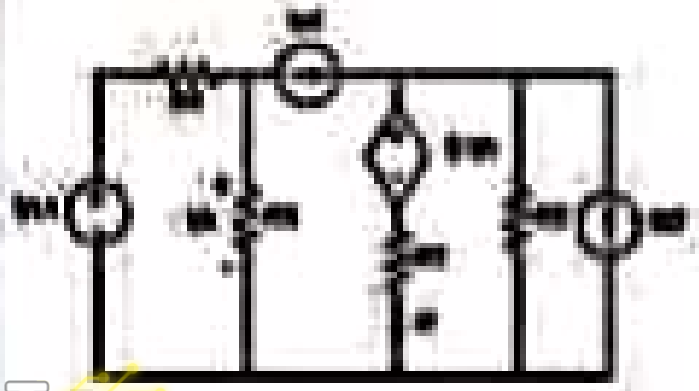
- $v(t) = 2e^{-5t} - 5te^{-5t}$, $t > 0$
- None of the choices
- $v(t) = -2e^{-5t} - 5te^{-5t}$, $t > 0$
- $v(t) = -2te^{-5t}$, $t > 0$
- $v(t) = -2e^{-5t} - 5te^{-5t}$, $t > 0$
- $v(t) = -5te^{-5t}$, $t > 0$

SUBMIT ANSWER



For the circuit shown in the figure , if Is = 22 mA, R1 =2 kΩ, R2 =4 kΩ, R3 = 1 kΩ, R4 = 1 kΩ, Vs = 4 V, find V2 using nodal analysis.

- (1) $\frac{8}{3}$V
- (2) $\frac{22}{3}$V
- (3) None of the choices
- (4) $-\frac{8}{3}$V
- (5) $\frac{22}{3}$ V
- (6) $\frac{4}{3}$V.

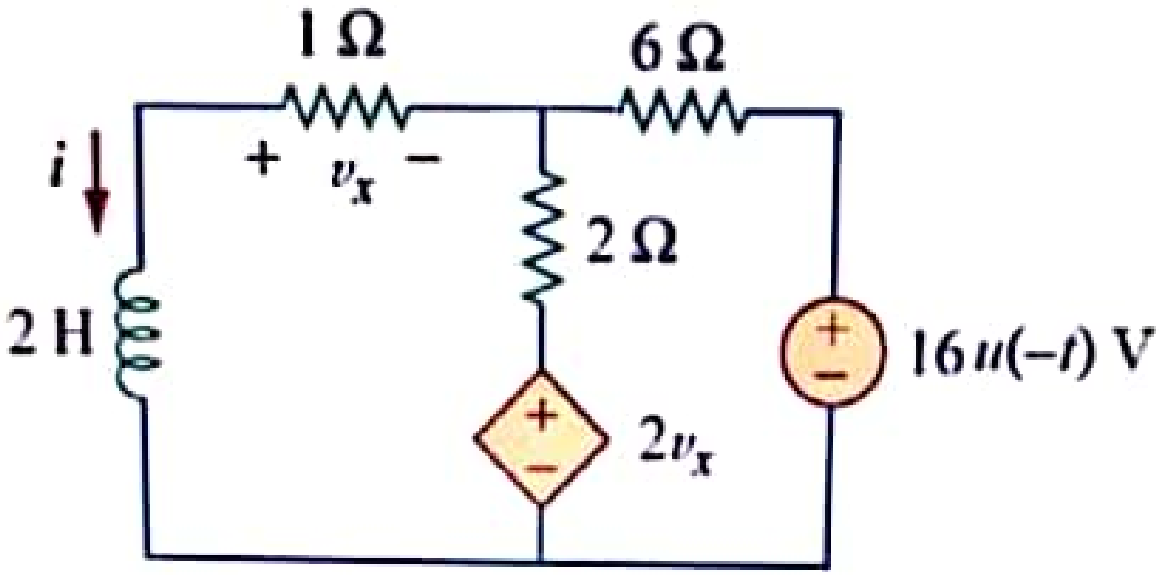


For the circuit shown in the figure if I1 =4 Ω, I2 =2 Ω, I3=3 Ω, I4=4 Ω, V1=5 V, I1=5 A, I2= 10 A, Find the contribution of I2 only in the value of I1.

- 3 A
- 2 A
- 4 A
- None of the choices
- 1 A
- 8 A

Question 1/4 (3 p.)

Find the time constant (in seconds) for the circuit in the figure below

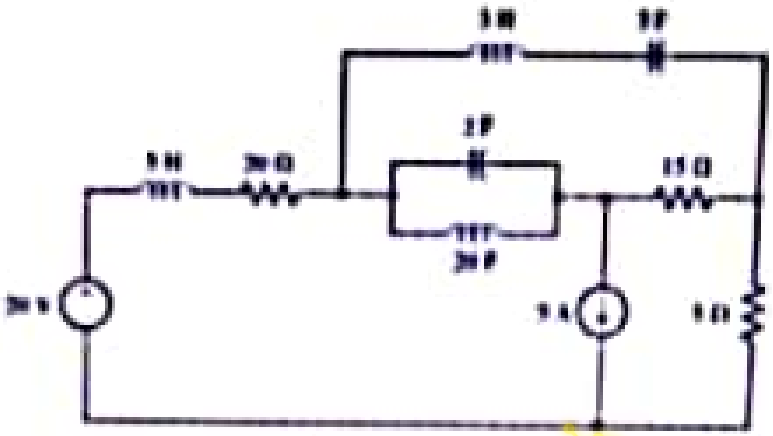


- 5
- 0.2
- 4
- 0.25
- 2
- 0.5
- None of the choices

Question 6/14 (2 p)

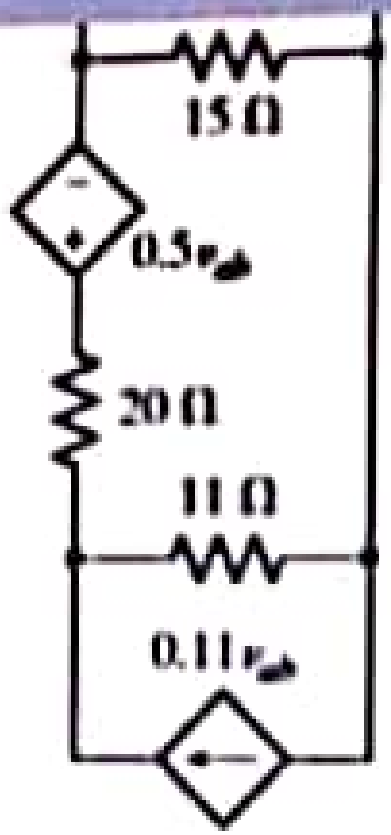
What is the value of the generated power by the current source 5 A?

Assume that there is no initial stored energy in the capacitors and inductors.



- 400 W
- 800 W
- 200 W
- 600 W
- None of the choices

SUBMIT ANSWER

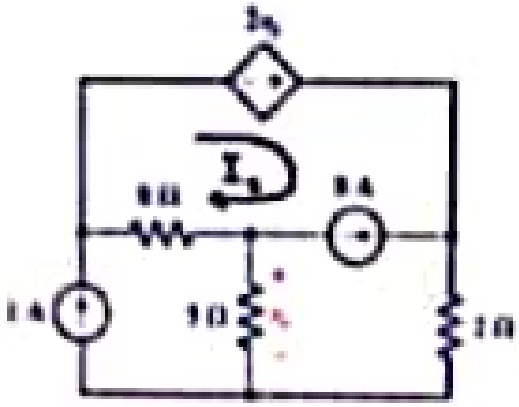


- $\frac{9003}{707}\ \Omega$
- $\frac{9300}{707}\ \Omega$
- $\frac{3900}{707}\ \Omega$
- None of the choices
- $\frac{3003}{707}\ \Omega$

SUBMIT ANSWER

Question 5/14 (1 p.)

Consider the circuit shown in the figure and find the value of the current I_x using mesh analysis.

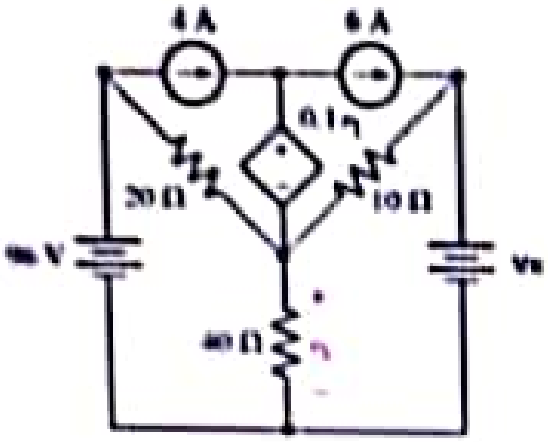


- 4.25 A
- -4.25 A
- None of the choices
- 4.52 A
- -4.52 A

SUBMIT ANSWER

Question 7/14 (2 p)

Consider the circuit shown in the figure. What is the contribution of the voltage source 96V only on the value of v_1 ?

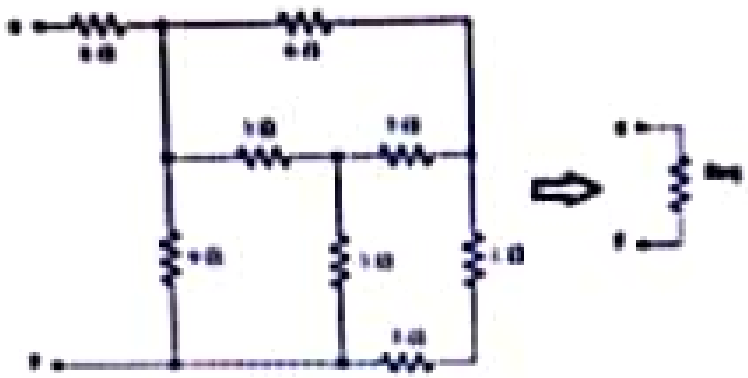


- ○ $\frac{291}{7}$
- ○ $\frac{129}{7}$
- ○ $\frac{192}{7}$
- ○ None of the choices
- ○ $\frac{219}{7}$

SUBMIT ANSWER

Question 14/14 (2 p)

What is the value of R_{eq} in the figure?

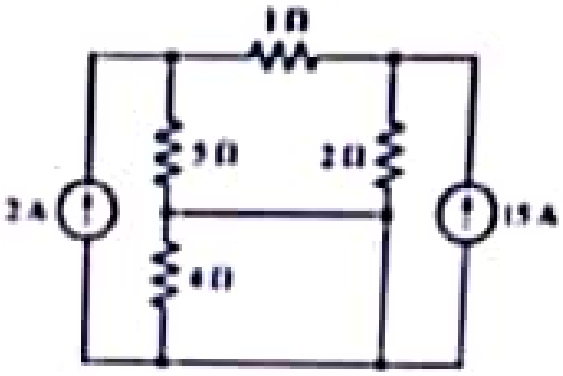


- $\frac{140}{13}\ \Omega$
- $\frac{130}{13}\ \Omega$
- None of the choices
- $\frac{120}{13}\ \Omega$
- $\frac{120}{14}\ \Omega$

SUBMIT ANSWER

Question 11/14 (2 p)

Consider the circuit shown in figure, what is the power absorbed



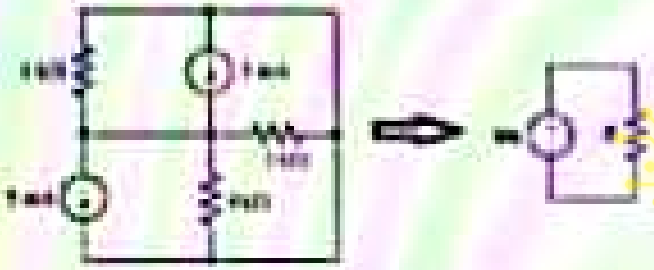
by the 1Ω resistor ?

- ○ 62.5 W
- ○ 6.25 W
- ○ None of the choices
- ○ 25 W
- ○ 60 W

SUBMIT ANSWER

Question 1/14 (2 p.)

If we simplify the circuit shown in the figure into one voltage source V_s and one resistor R, then what are the values of V_s and R?

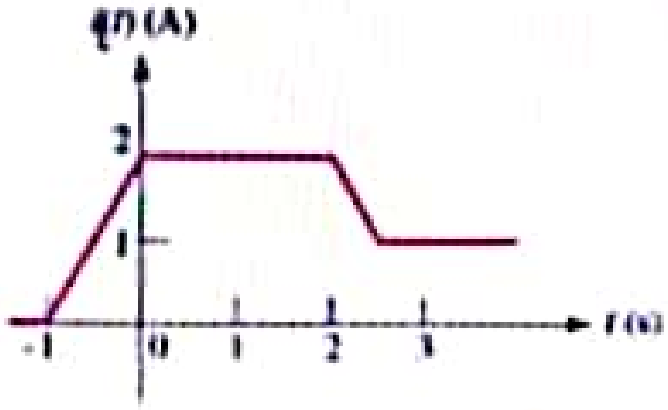


- None of the choices
- V_s = 8/7 volts, R = 4/7 kΩ
- V_s = 8/7 volts, R = 4/7 kΩ
- V_s = 4/7 volts, R = 8/7 kΩ
- V_s = 4/7 volts, R = 8/7 kΩ

SUBMIT ANSWER

Question 4/14 (2 p.)

The plot shown in the figure depicts the current through a 20 mH inductor. Find the maximum stored energy (in mJ) in the inductor given that $i_L(t=-\infty)=0$ A.

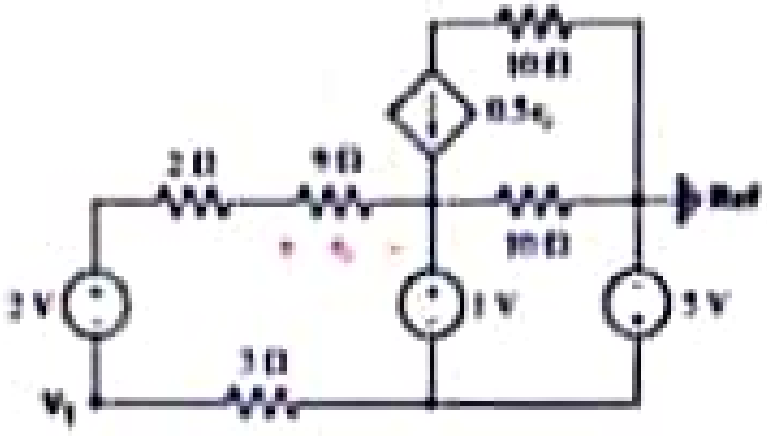


- 40
- .04
- None of the choices
- 0.4
- 400

SUBMIT ANSWER

Question 10/14 (2 p.)

Consider the circuit shown in the figure, what is the value of the voltage V_1 using nodal analysis?

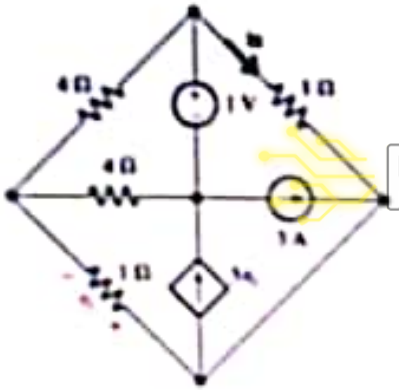


- $\frac{-67}{14}$ V
- $\frac{14}{67}$ V
- $\frac{-14}{67}$ V
- $\frac{67}{14}$ V
- None of the choices

SUBMIT ANSWER

Question 2/14 (2 p.)

Consider the circuit shown in the figure and find the contribution of the current source 3A only

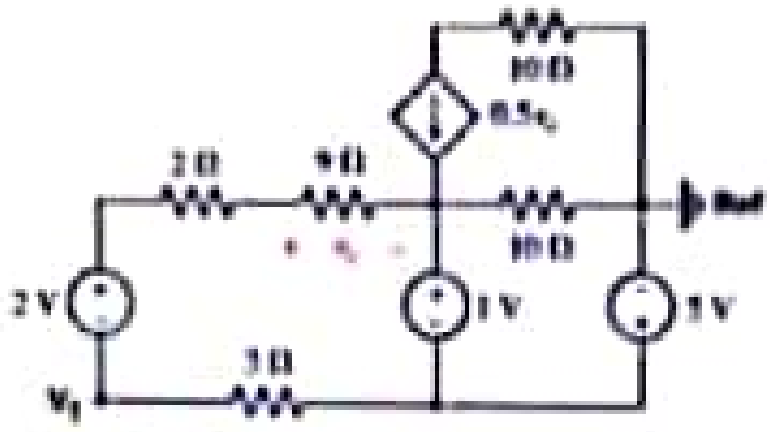


- ○ -7/9 A
- ○ -9/7 A
- ○ None of the choices
- ○ 9/7 A
- ○ 7/9 A

SUBMIT ANSWER

Question 10/14 (2 p.)

Consider the circuit shown in the figure, what is the value of the voltage V_1 using nodal analysis?

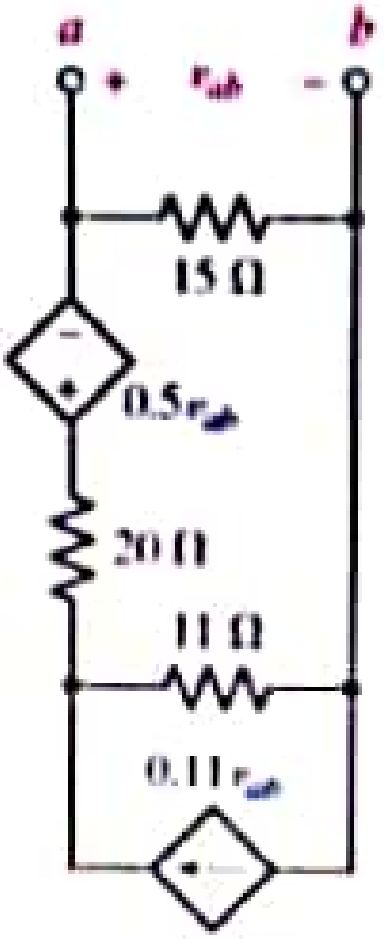


- $\frac{-67}{14}$ V
- $\frac{14}{67}$ V
- $\frac{-14}{67}$ V
- $\frac{67}{14}$ V
- None of the choices

SUBMIT ANSWER

Question 9/14 (3 p)

Find the Thevenin equivalent resistance R_{th} as seen by an unspecified element connected between terminals a and b.



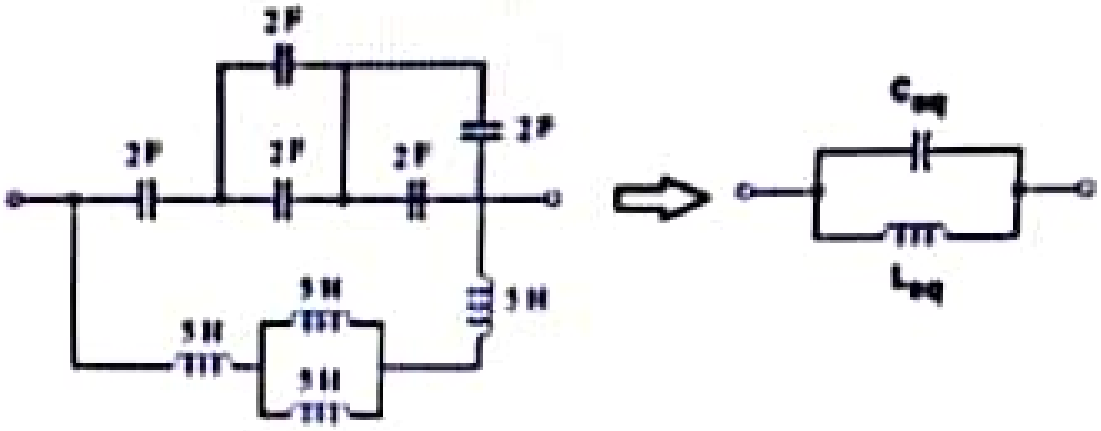
- ○ $\frac{9503}{107}\ \Omega$
- ○ $\frac{2302}{107}\ \Omega$
- ○ $\frac{3905}{1052}\ \Omega$

For the circuit shown in the figure 1, if I1 = 2 mA, R1 =5 kΩ, R2 =1 kΩ, R3 = 4kΩ, R4 = 2 kΩ, R5=4 kΩ, R6 = 3 kΩ, and R7 = 1 kΩ, find the absorbed power by R3.

- 16 mW
- 64 mW
- None of the choices
- 40 mW
- 32 mW
- 80 mW

Question 12/14 (2 p)

Consider the circuit shown in the figure. After simplifying the circuit into one capacitor and one inductor, what are the values of C_{eq} and L_{eq}

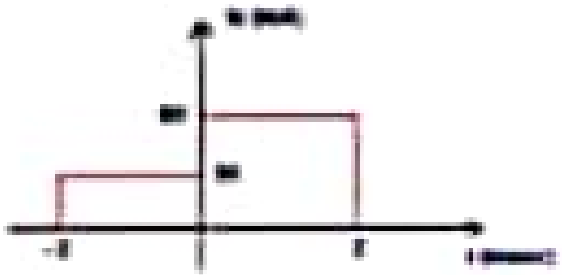


- C_{eq}=1.75 F, L_{eq}=0.1H
- C_{eq}=17.5 F, L_{eq}=1H
- C_{eq}=1.75 F, L_{eq}=1H
- None of the choices
- C_{eq}=1F, L_{eq}=17.5H

SUBMIT ANSWER

Question 3/14 (3 p.)

The plot shown in the figure depicts the current through a10 μF capacitor. Find the voltage across the capacitor $v_c(t=0)$, given that $v_c(t=-\infty)=0$.



- 30 V
- None of the choices
- 3 V
- 40 V
- 4 V

SUBMIT ANSWER

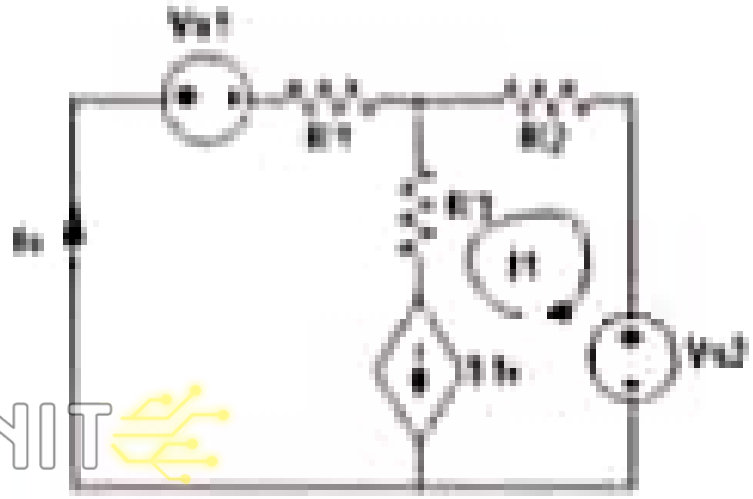
Question 2/15 (4 p.)

In a series resonant RLC circuit, if the voltage source is $v_s(t) = 60\sin(\omega t)$ V, the maximum value of the current is 10 A and occurs at $\omega = 100$ K rad/s, and the value of the current at $\omega = 90$ K rad/s is 7.071 A. Find the values of L and C.

- ○ $L = 0.3515$ mH, $C = 0.284$ μF
- ○ $L = 0.703$ mH, $C = 0.142$ μF
- ○ $L = 0.284$ mH, $C = 0.3515$ μF
- ○ $L = 0.142$ mH, $C = 0.703$ μF
- ○ $L = 0.142$ mH, $C = 0.284$ μF

SUBMIT ANSWER

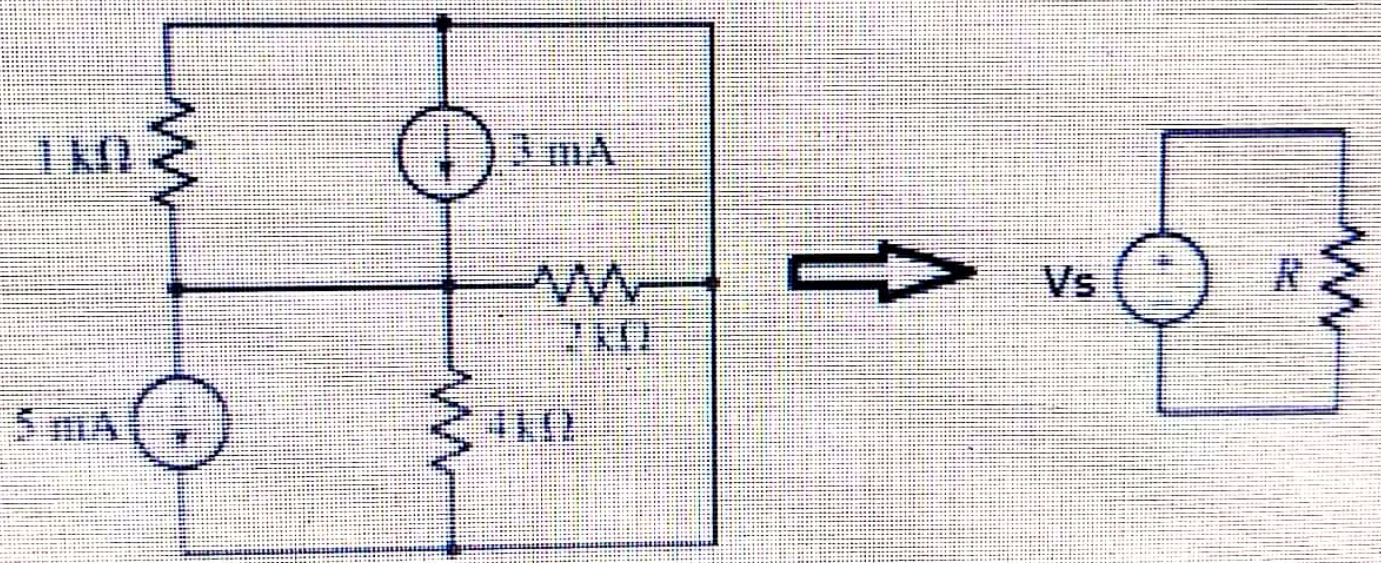
- $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) + \frac{\sqrt{L}}{\sqrt{C}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V
- $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) - \frac{\sqrt{L}}{\sqrt{C}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V
- $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) + \frac{\sqrt{C}}{\sqrt{L}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V
- $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) - \frac{\sqrt{C}}{\sqrt{L}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V
- $v(t) = \sin\left(\frac{t}{\sqrt{LC}}\right)$ V
- $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right)$ V



For the circuit shown in the figure, if R1 = 1 kΩ, R2 = 2 kΩ, R3 = 3 kΩ, Vs1 = 5 V, Vs2 = -11 V, find I1 using mesh analysis.

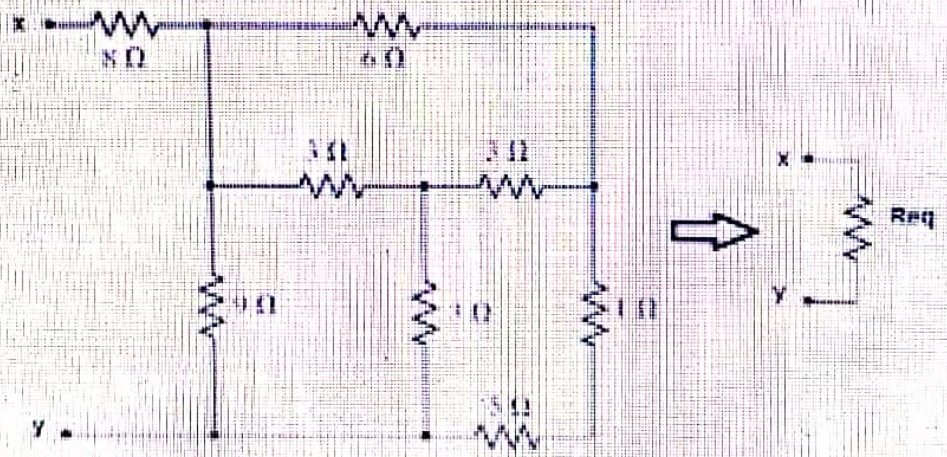
1) 5 mA
2) 3 mA
3) 4 mA
4) None of the choices
5) 2 mA
6) 1 mA

what are the values of V_s and R?

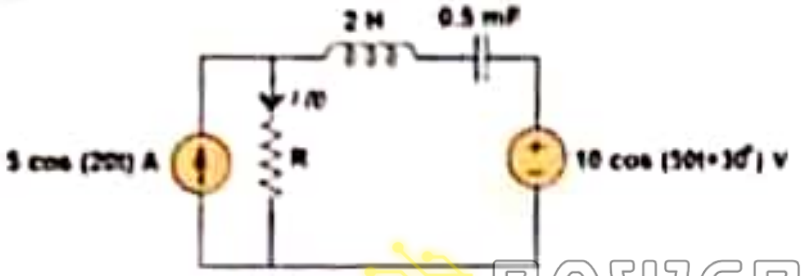


Question 10/14 (2 p.)

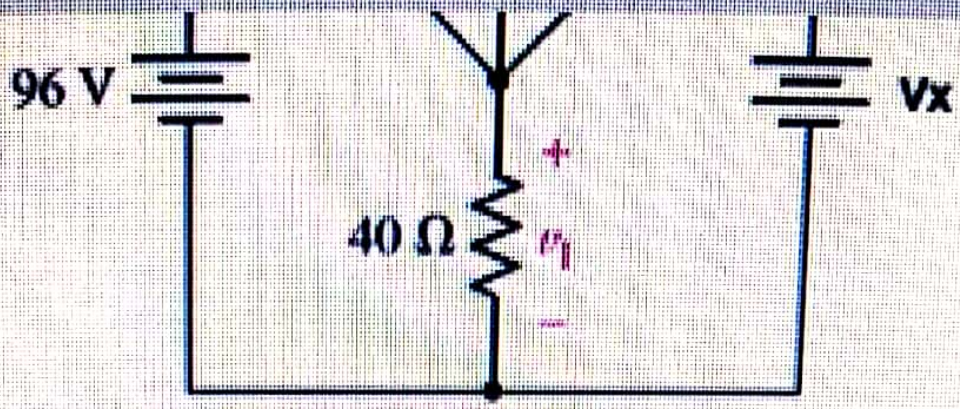
What is the value of R_{eq} in the figure?



Consider the circuit in the figure and find i(t) when R=10 Ω

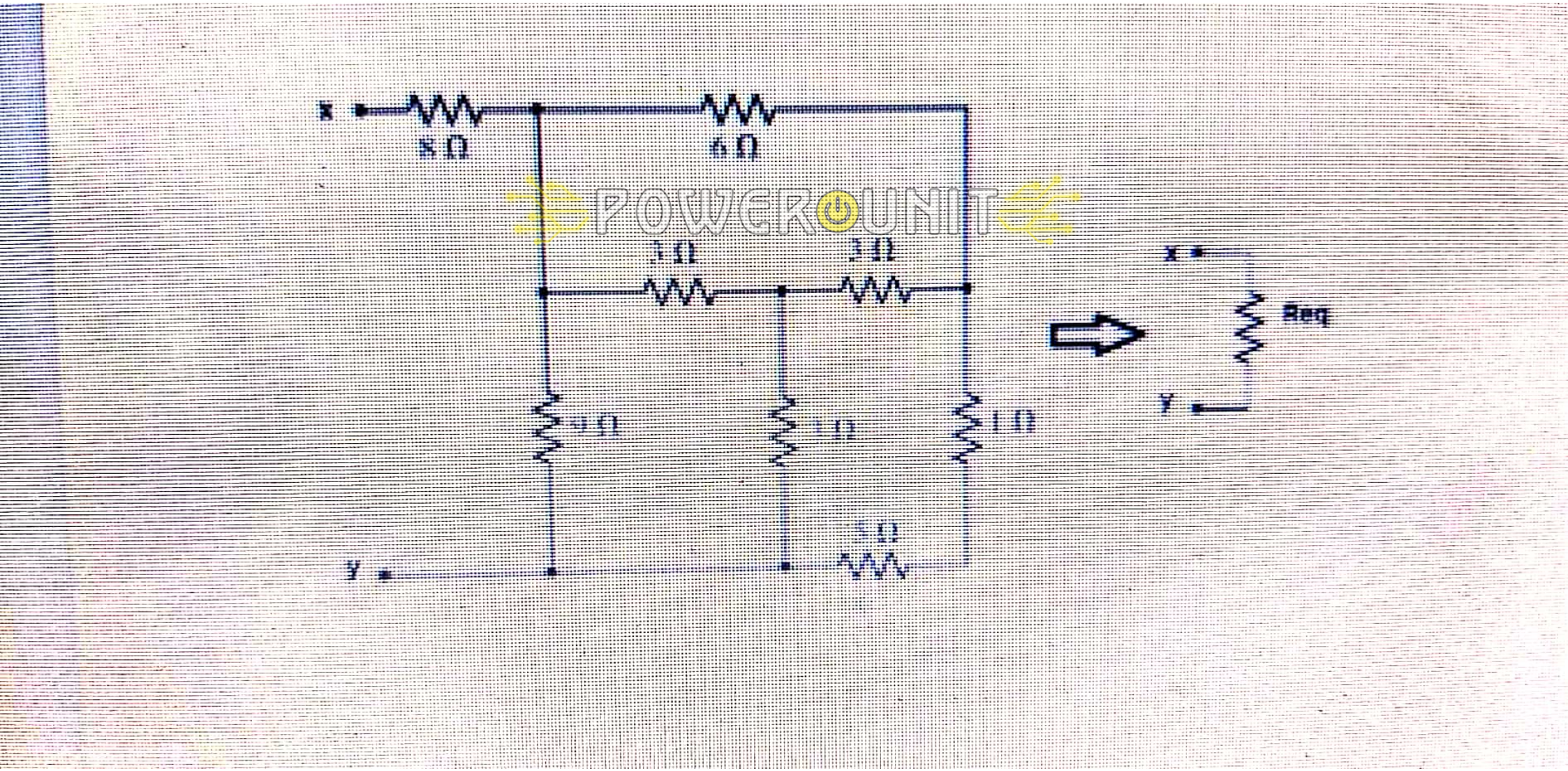


- $i(t) = 3.841\cos(20t - 39.81^{o}) + 0.128\cos(50t - 20.19^{o})$ A
- $i(t) = 3.841\cos(20t + 39.81^{o}) + 0.128\cos(50t + 20.19^{o})$ A
- $i(t) = 3.841\cos(20t - 39.81^{o}) - 0.128\cos(50t - 20.19^{o})$ A
- $i(t) = 4.932\cos(20t - 9.462^{o}) - 0.164\cos(50t - 50.54^{o})$ A
- $i(t) = 4.932\cos(20t - 9.462^{o}) + 0.164\cos(50t - 50.54^{o})$ A
- $i(t) = 4.932\cos(20t + 9.462^{o}) + 0.164\cos(50t + 50.54^{o})$ A



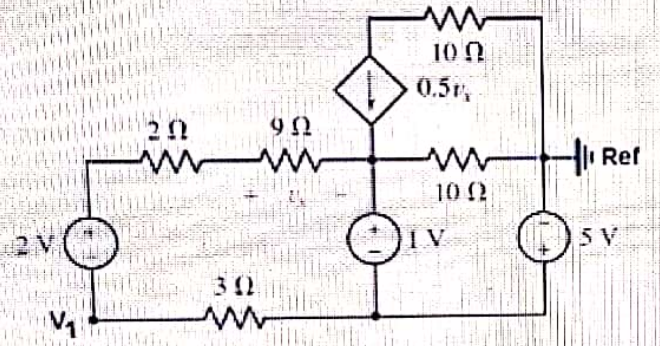
- $\frac{192}{7}$
- $\frac{219}{7}$
- $\frac{291}{7}$
- $\frac{129}{7}$
- None of the choices

SUBMIT ANSWER



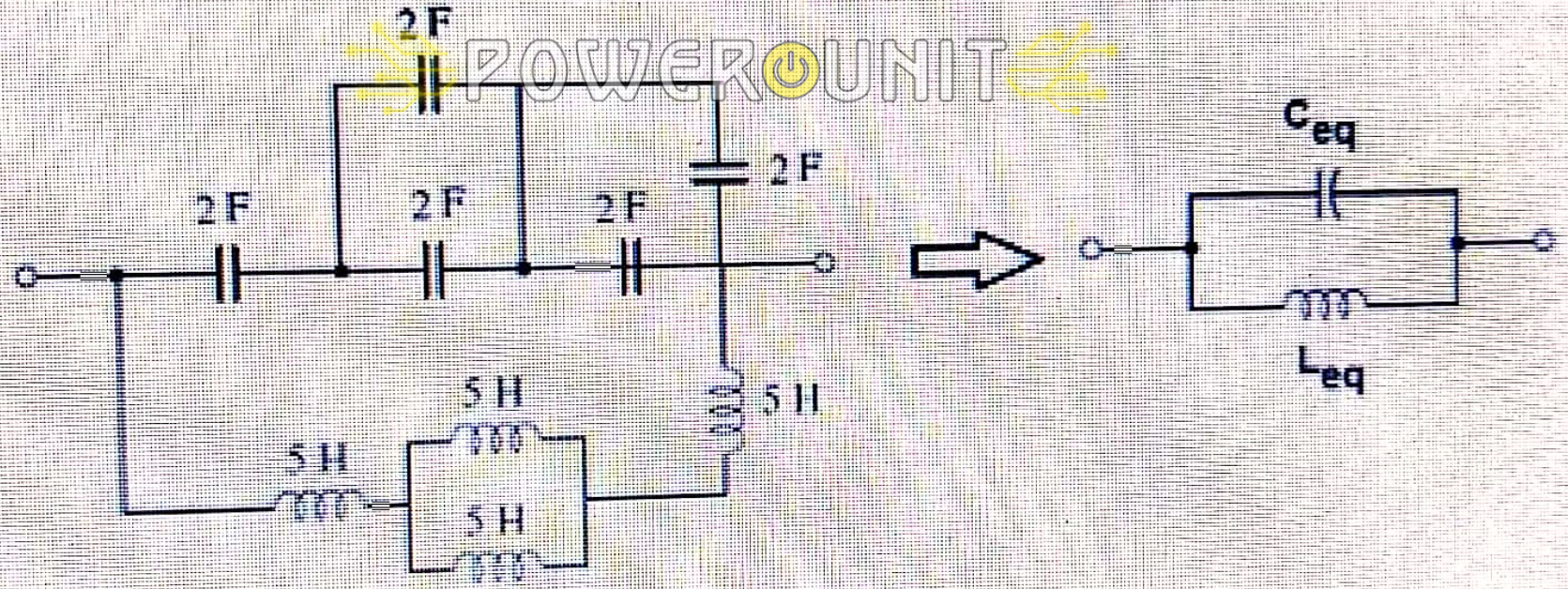
Question 11/14 (2 p.)

Consider the circuit shown in the figure, what is the value of the voltage V_1 using nodal analysis?



- $\frac{14}{67}$ V
- $\frac{-67}{14}$ V

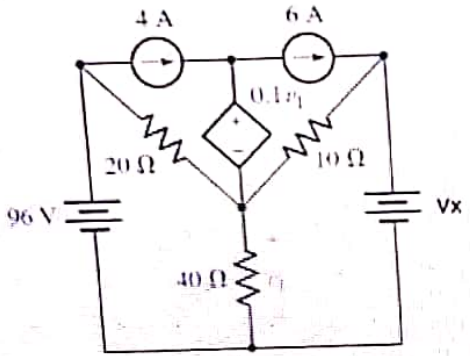
inductor, what are the values of C_{eq} and L_{eq}



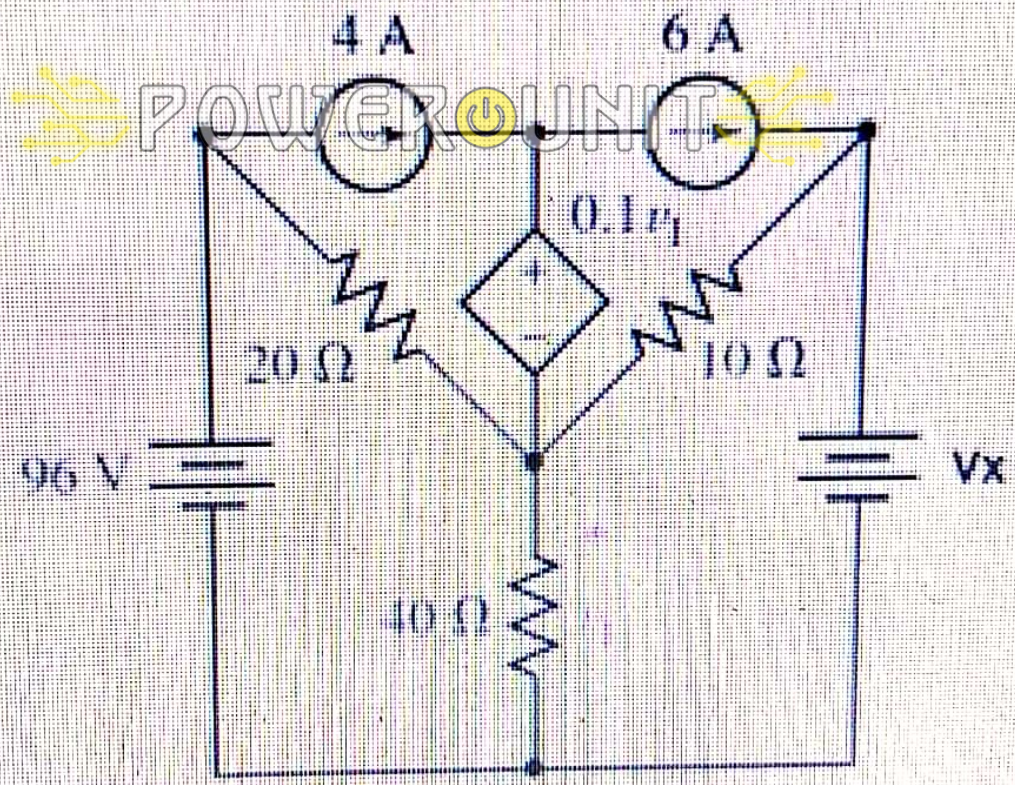
EE213-F... ...

Question 12/14 (2 p.)

Consider the circuit shown in the figure. What is the contribution of the voltage source 96V only on the value of v_1 ?

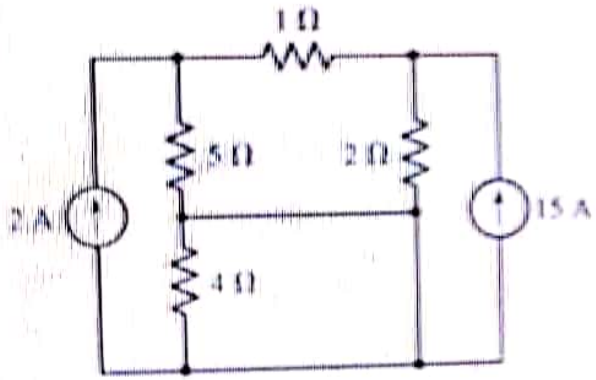


○ $\frac{192}{1}$

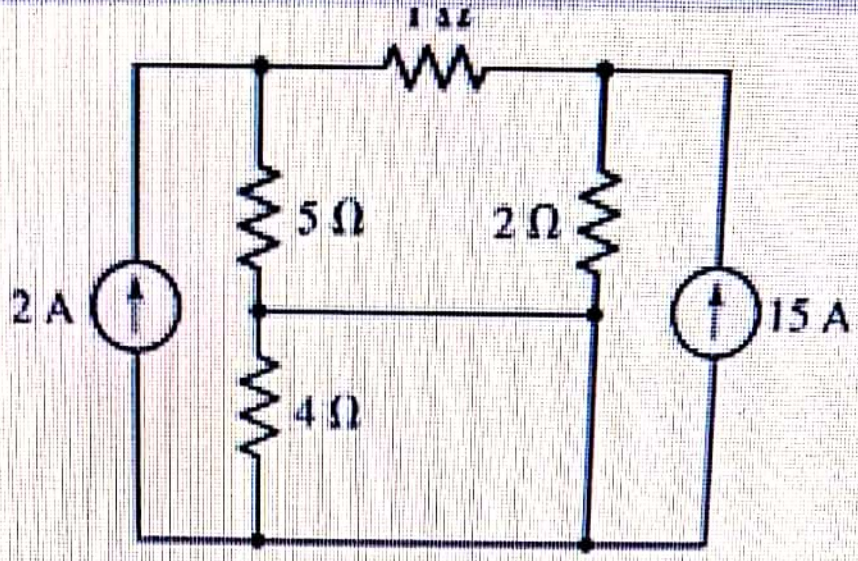


Question 14/14 (2 p.)

Consider the circuit shown in figure, what is the power absorbed by the 1Ω resistor ?



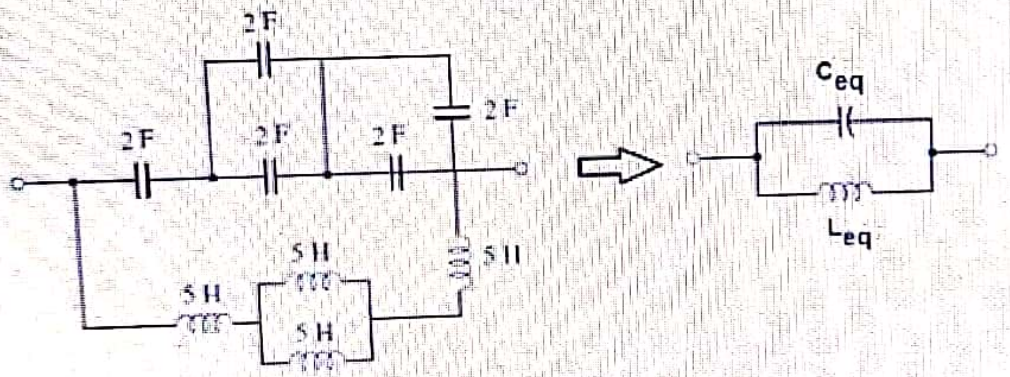
○ 62.5 W



- 62.5 W
- 25 W
- None of the choices
- 60 W
- 6.25 W

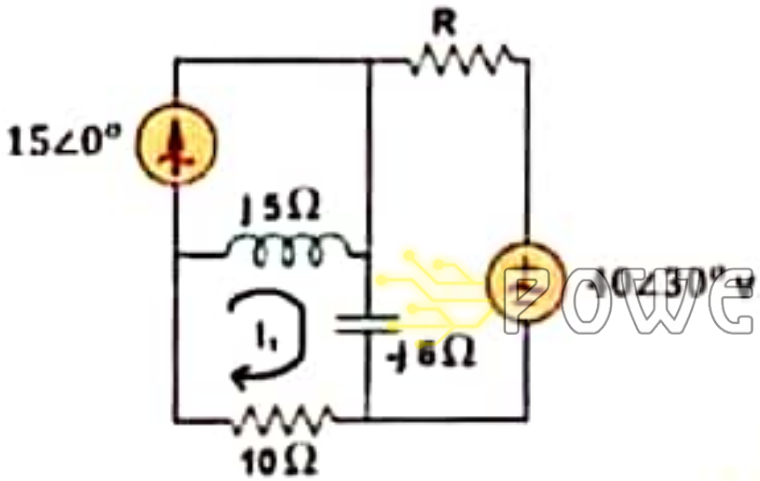
Question 13/14 (2 p.)

Consider the circuit shown in the figure. After simplifying the circuit into one capacitor and one inductor, what are the values of C_{eq} and L_{eq}



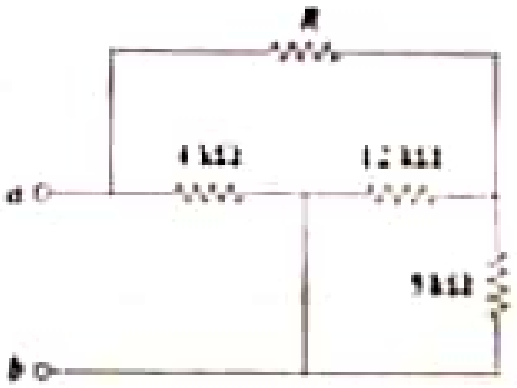
- None of the choices

Find I_1 when R=10 Ω.



- $I_1 = 8.86\angle 99.3^{o}$ A
- $I_1 = 6.5\angle 99.6^{o}$ A
- $I_1 = 6.86\angle 99.3^{o}$ A
- $I_1 = 5.6\angle 99.3^{o}$ A

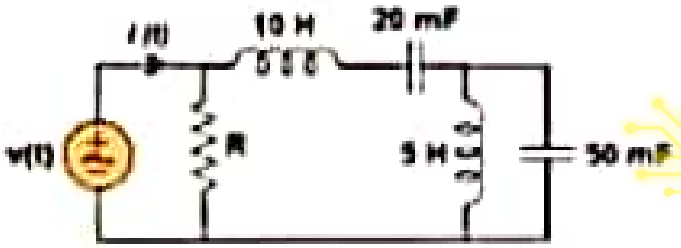
If the equivalent resistor at the terminals a-b is 2.5 kΩ. What is the value of the resistor R in the figure?



- $\frac{416}{17}$ KΩ
- $\frac{80}{51}$ KΩ
- $\frac{80}{17}$ KΩ
- $\frac{208}{17}$ KΩ
- $\frac{160}{17}$ KΩ

Question 1/15 (1 p.)

Assume that $\omega = 10$ rad/s and R= 5 Ω. Which of the following statments is true?



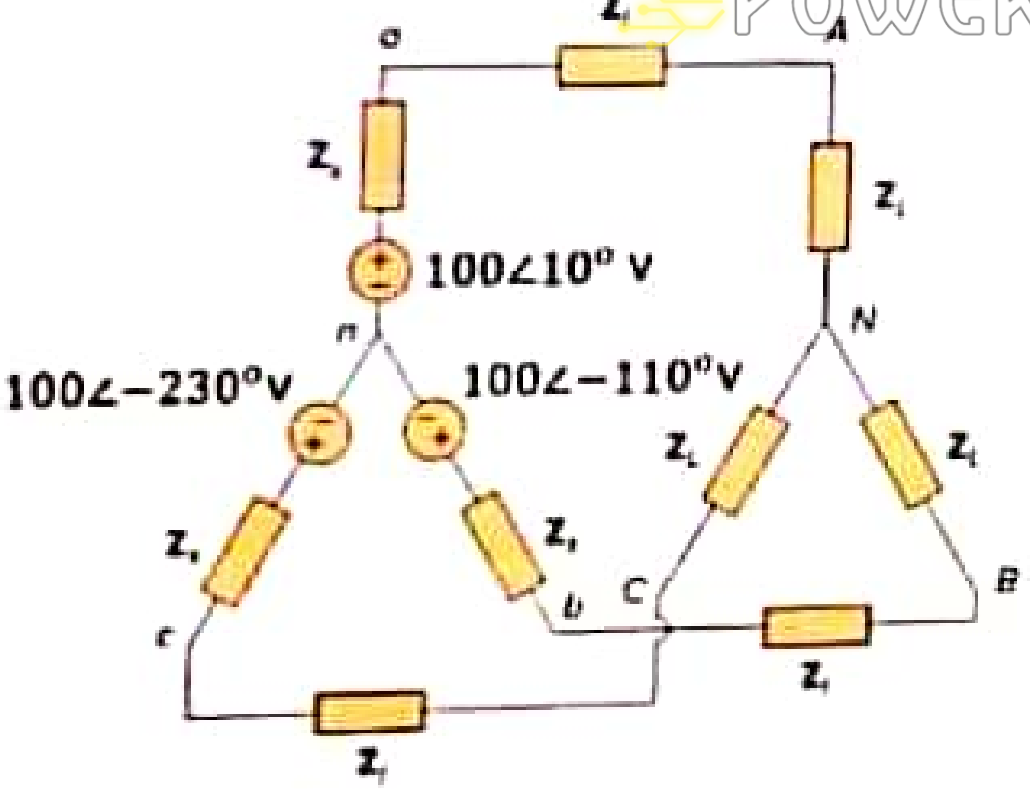
- i(t) lags v(t) by 3.08^{o}
- i(t) lags v(t) by 82.29^{o}
- None of the choices
- i(t) lags v(t) by 30.8^{o}
- i(t) lags v(t) by 28.29^{o}

- ○ V_{th}=4 V, R_{th}=1 Ω
- ○ V_{th}=2 V, R_{th}=1 Ω
- ○ V_{th}=8 V, R_{th}=1 Ω
- ○ V_{th}=2 V, R_{th}=2 Ω
- ○ V_{th}=8 V, R_{th}=8 Ω

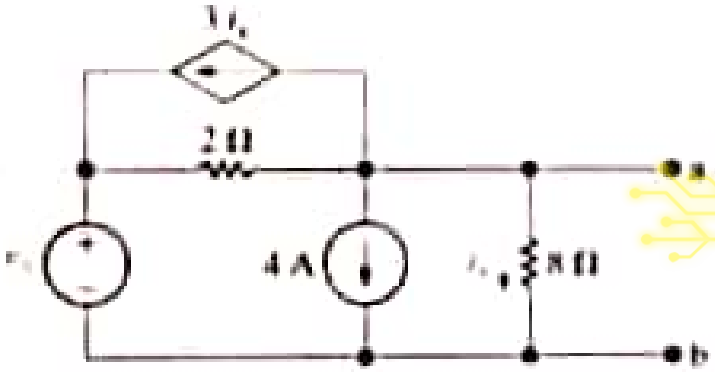
SUBMIT ANSWER

Question 7/15 (4 p)

Find V_{ab} if $Z_s = 10 + 6j\ \Omega$, $Z_l = 2 - j4\ \Omega$, $Z_L = 5 + j2\ \Omega$



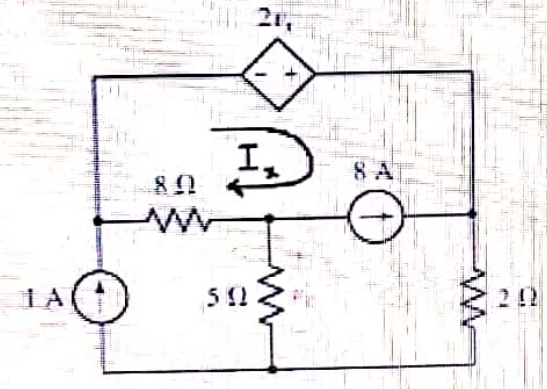
Find the Thévenin equivalent circuit with respect to the terminals a,b for the circuit shown Assume $v_s = 24V$



- $V_{th}=4$ V, $R_{th}=1$ Ω
- $V_{th}=2$ V, $R_{th}=1$ Ω
- $V_{th}=8$ V, $R_{th}=1$ Ω
- $V_{th}=2$ V, $R_{th}=2$ Ω

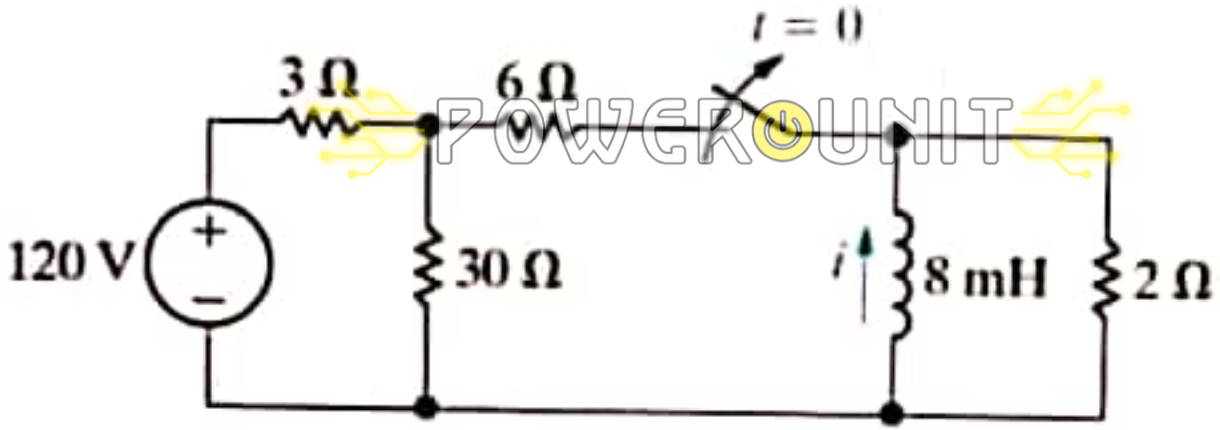
Question 2/14 (3 p.)

Consider the circuit shown in the figure and find the value of the current I_x using mesh analysis.



Question 15/15 (3 p.)

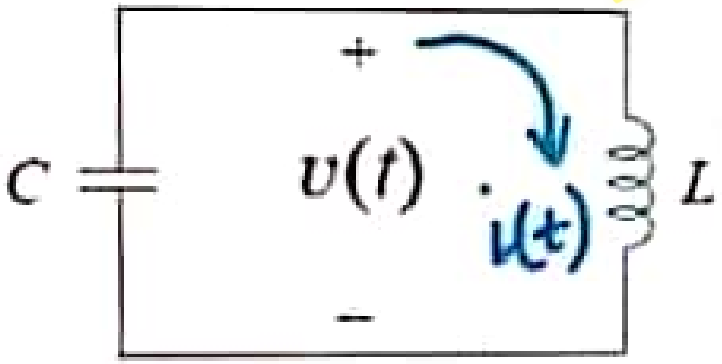
Derive an expression for $i(t)$ for $t \geq 0$.



- ○ $i(t) = 12.5e^{-250t}$ A
- ○ $i(t) = 12.5e^{-125t}$ A
- ○ $-250t$

Question 12/15 (4 p.)

Find an experession for $v(t)$ in the circuit given that $i(0) = 1$ A, $v(0) = 1$ V.

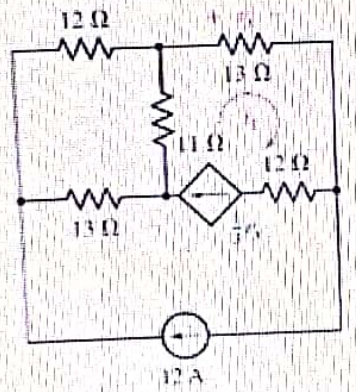


○ $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) + \frac{\sqrt{L}}{\sqrt{C}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V

○ $v(t) = \cos\left(\frac{t}{\sqrt{LC}}\right) - \frac{\sqrt{L}}{\sqrt{C}}\sin\left(\frac{t}{\sqrt{LC}}\right)$ V

Question 7/14 (2 p.)

What is the value of the current i_1 in the circuit given below?

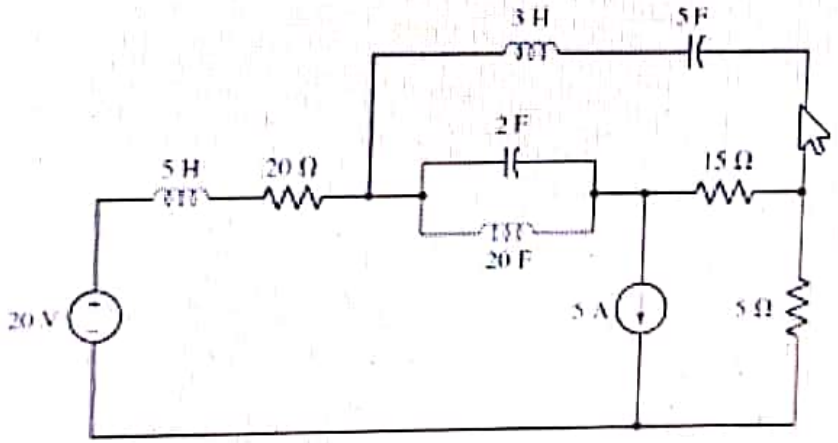


- 3.2 A
- -3.8 A

Question 5/14 (2 p.)

What is the value of the generated power by the current source 5 A?

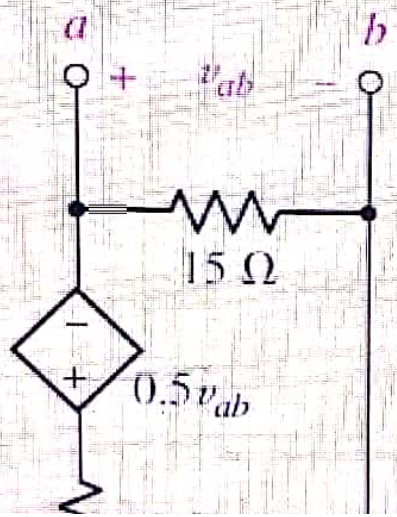
Assume that there is no initial stored energy in the capacitors and inductors.



- ○ 600 W

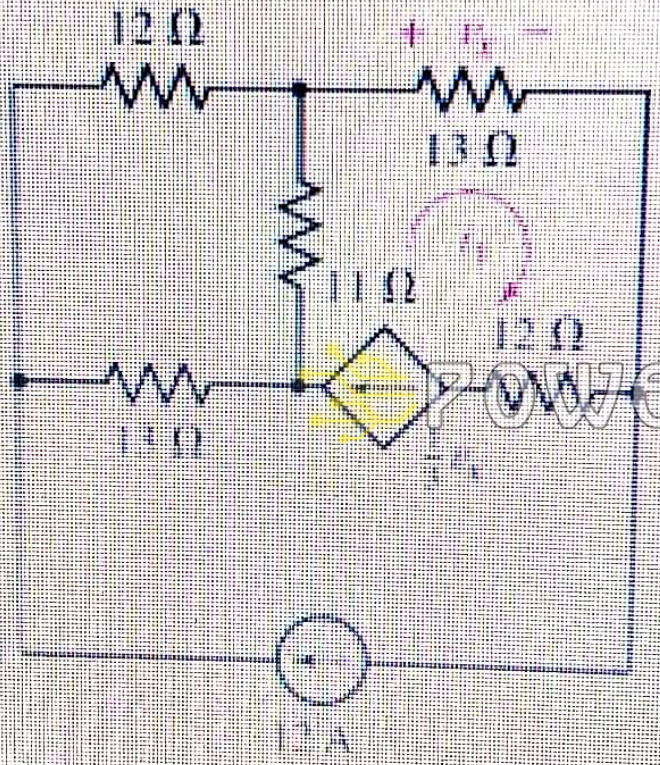
Question 4/14 (3 p.)

Find the Thevenin equivalent resistance R_{th} as seen by an unspecified element connected between terminals a and b.



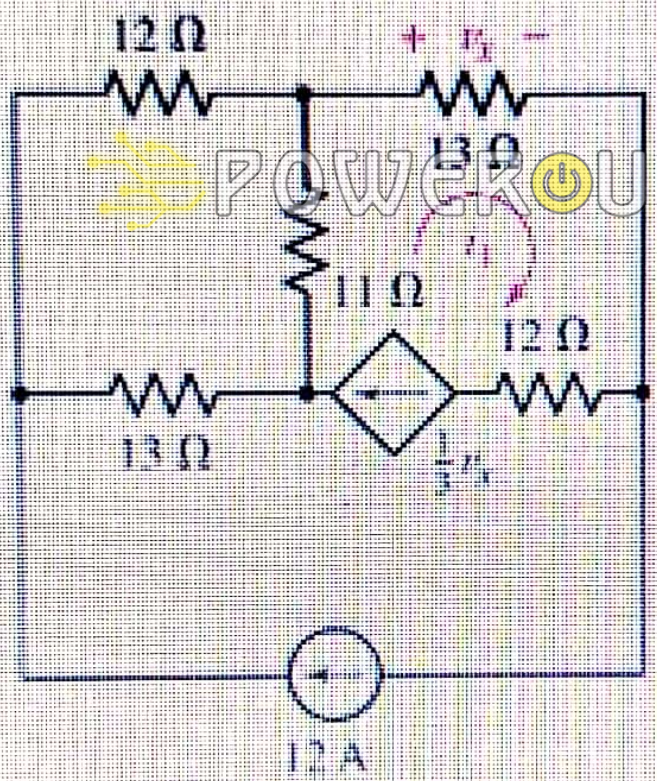
uestion 7/14 (2 p.)

Vhat is the value of the current



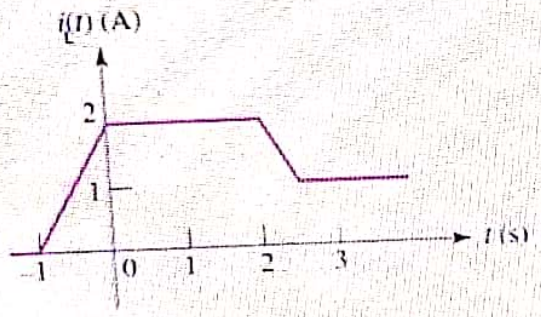
○ 3.2 A

○ -3.8 A



Question 8/14 (2 p.)

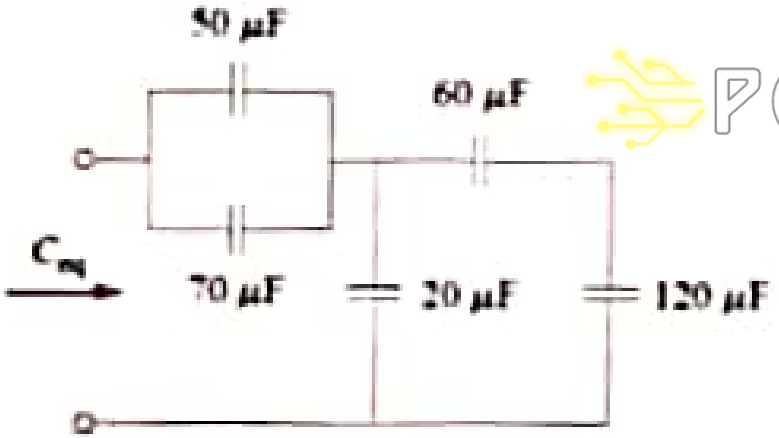
The plot shown in the figure depicts the current through a 20 mH inductor. Find the maximum stored energy (in mJ) in the inductor given that $I_L(t=-\infty)=0$ A.



○ 0.4

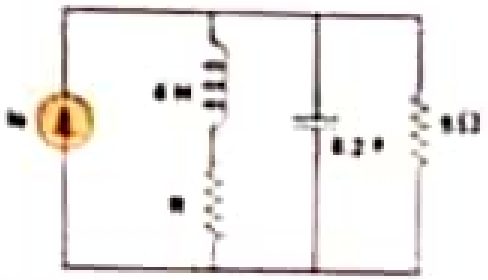
Question 14/15 (3 p)

Find the equivalent capacitance seen at the terminals of the circuit in the figure



- ○ 60 μF
- ○ 40 μF
- ○ 10 μF

Calculate the resonant frequency of the following circuit when R= 2 Ω

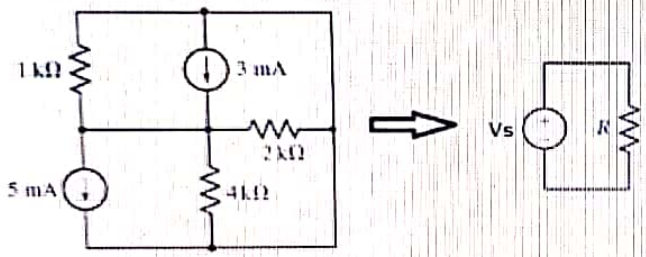


- ○ 1 rad/s
- ○ 0.25 rad/s
- ○ 3.2 rad/s
- ○ 0.5 rad/s
- ○ 0.8 rad/s

SUBMIT ANSWER

Question 9/14 (2 p.)

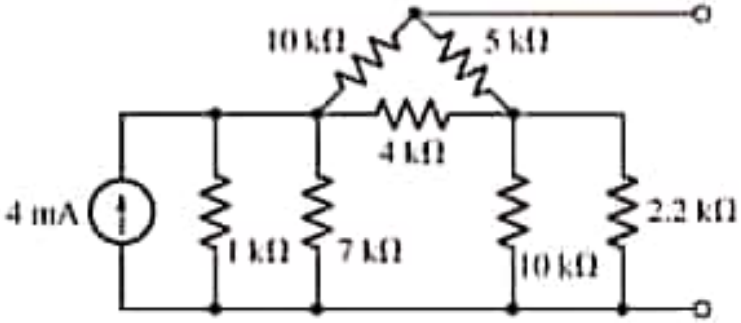
If we simplify the circuit shown in the figure into one voltage source V_s and one resistor R, then what are the values of V_s and R?



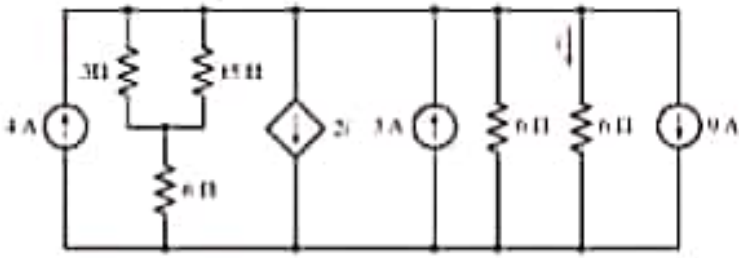
- ○ V_s=-8/7 volts, R= 4/7 KΩ
- ○ None of the choices

Q1: Find v_o

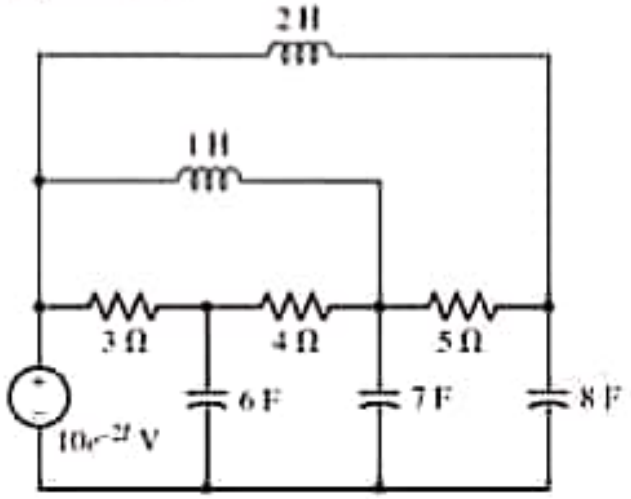
Q2: Find the value of the resistance to be connected on the open circuit terminal to absorb the maximum power and determine the value of the absorbed power.



Q3: Use super position technique to determine the power absorbed by the 15 Ω resistor.



Q4: Draw the dual circuit



○ $i(t) = 12.5e^{-250t}$ A

○ $i(t) = 12.5e^{-125t}$ A

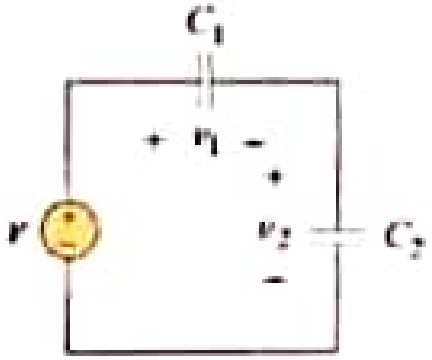
○ $i(t) = -12.5e^{-250t}$ A

○ $i(t) = 12.5e^{-40t}$ A

○ $i(t) = -12.5e^{-40t}$ A

SUBMIT ANSWER

Consider the circuit in the figure. Let C_1=5F, C_2=4F and V=18 cos(ωt) volts. Evaluate v_1.



- ○ 8 cos(ωt) V
- ○ 27 cos(ωt) V
- ○ 0
- ○ 12 cos(ωt) V
- ○ 15 cos(ωt) V

11

What is a planar circuit
(1 Point)

Enter your answer

12

Write down Ohm's law
(1 Point)

Enter your answer

22

The value of 'Vo' due to the AC voltage source
(3 Points)

- -2.498 cos(2t − 30.79°)
- 2.498∠30.79
- 2.498 cos(5t − 30.79°)
- -2.498∠30.79
- 2.498 cos(2t − 30.79°)
- 2.498 V
- None of these

Answer the following questions:

Assume a load is disconnected between 'a' and 'b' terminals.

5

Find the Thevenin's resistance
(1 Point)

Enter your answer

6

The Thevenin's voltage
(2 Points)

17

The Thevenin impedance *
(3 Points)

- -4.473∟-7.64
- 4.473∟7.64
- 4.473∟-7.64
- None of these
- -4.473∟7.64

18

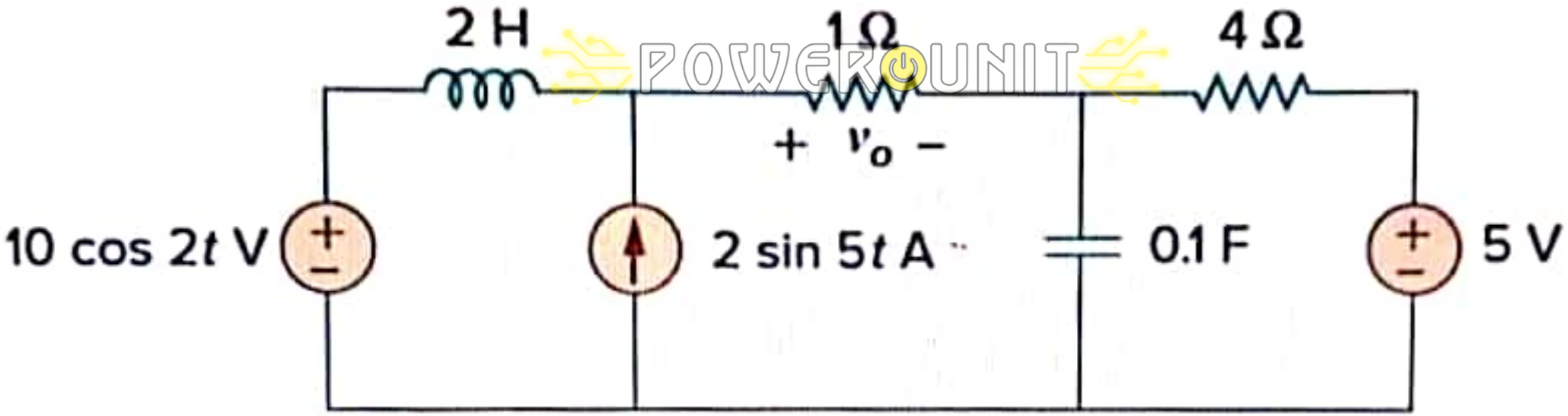
The Thevenin voltage * 
(3 Points)

- -11.763∟-72.9 V
- None of these
- 11.763∟72.9 V
- -11.763∟72.9 V
- 11.763∟-72.9 V

Next

Q5. (15 points)

Consider Figure 4 shown



19

The proper method to analyze this circuit is
(3 Points)

11

What is a linear circuit
(1 Point)

Enter your answer

12

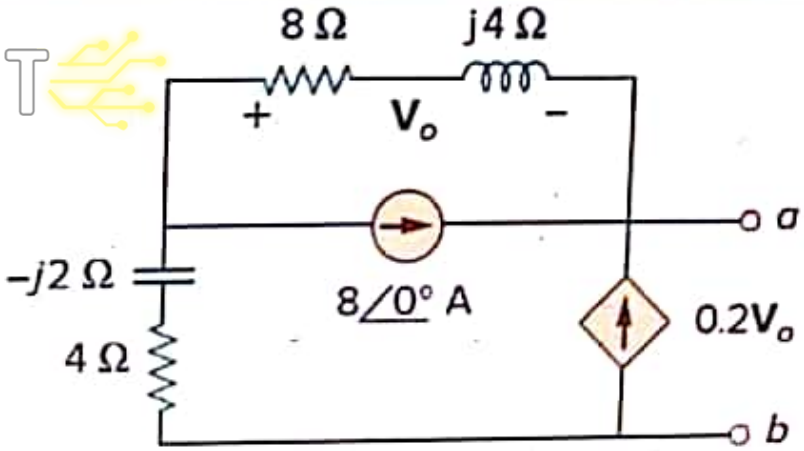
Write down Ohm's law
(1 Point)

Enter your answer

EE213: Final Exam Summer 2019 (EE213: Electric Circuits (Summer 2019/2020))

* Required

Linked MCQs
Q4. (6 points)



Consider Figure 3 shown

17

The Thevenin impedance *
(3 Points)

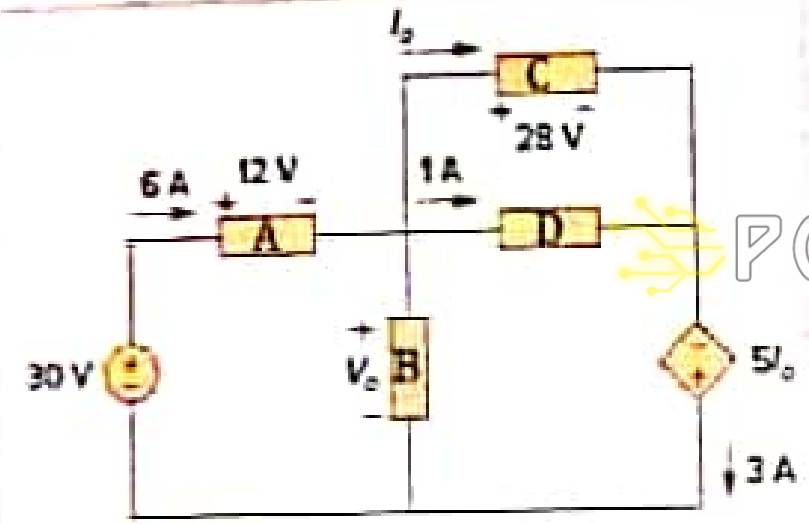
4

When we should assume a 1 A current source at the output terminals *
(2 Points)

Enter your answer

5

What will be the shape of the inductor current in an LC circuit *



Answer the following questions

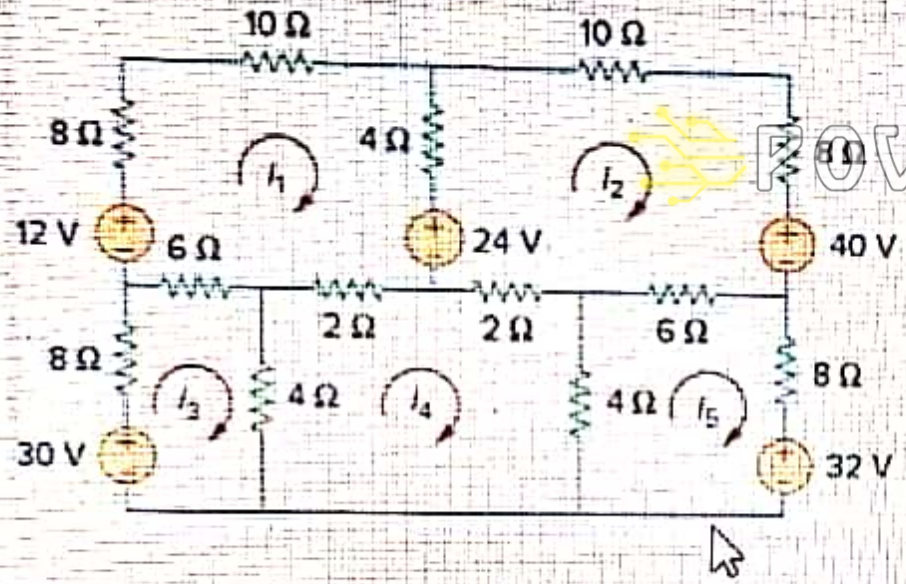
3

Vo

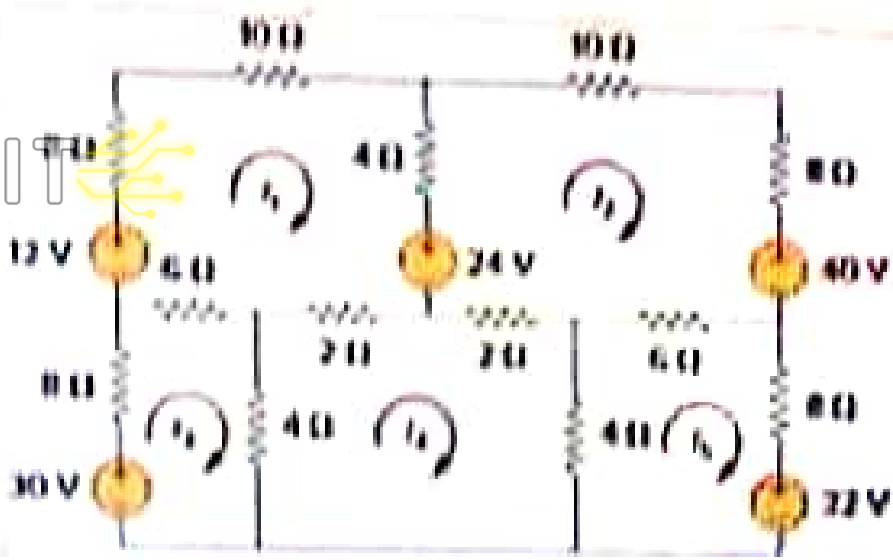
(1 نقطة)

اعمل إجابتك

9



How many nodal equations are required to find all the nodal voltages
(1 نقطة)

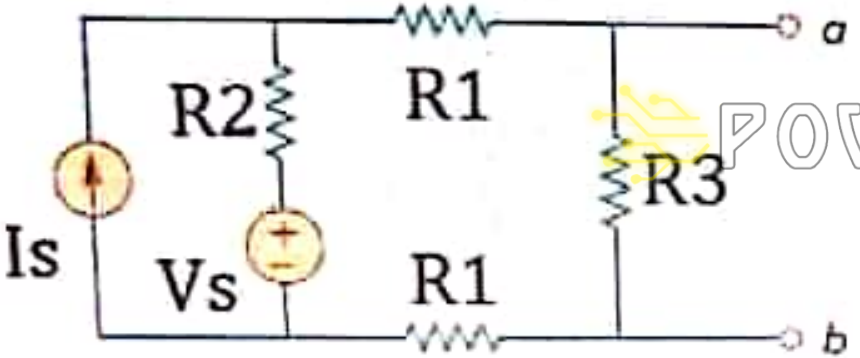


How many nodal equations are required to find all the nodal voltages
(1 Point)

21

The value of 'Vo' due to the DC voltage source
(3 Points)

- 2 V
- 1 V
- 0
- -1 V
- -5 V
- None of these



:Answer the following ques

Take: R1=8Ω, R2=4Ω, R3=5Ω, Vs=12

5

Find the Norton resistance

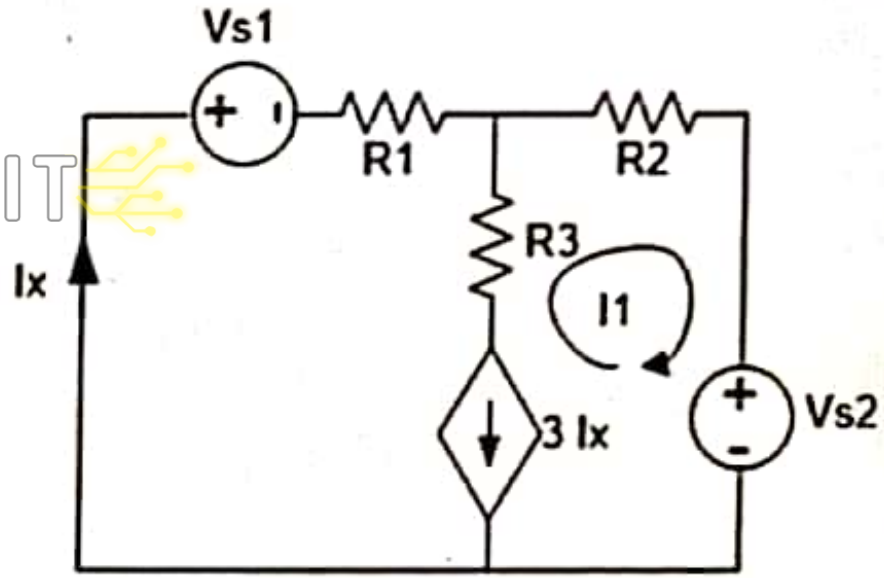
(علامة 1)

- $8i_1 - 4i_2 = 7$ *and* $-12i_1 + 3i_2 = -5$
- $5i_1 + 2i_2 = 12$ *and* $-6i_1 + 7i_2 = -25$

3. For the circuit shown, and based on the superposition principle, the portion of the current i_x under the effect of the 3.5 V voltage source acting alone is: * (2 Points)

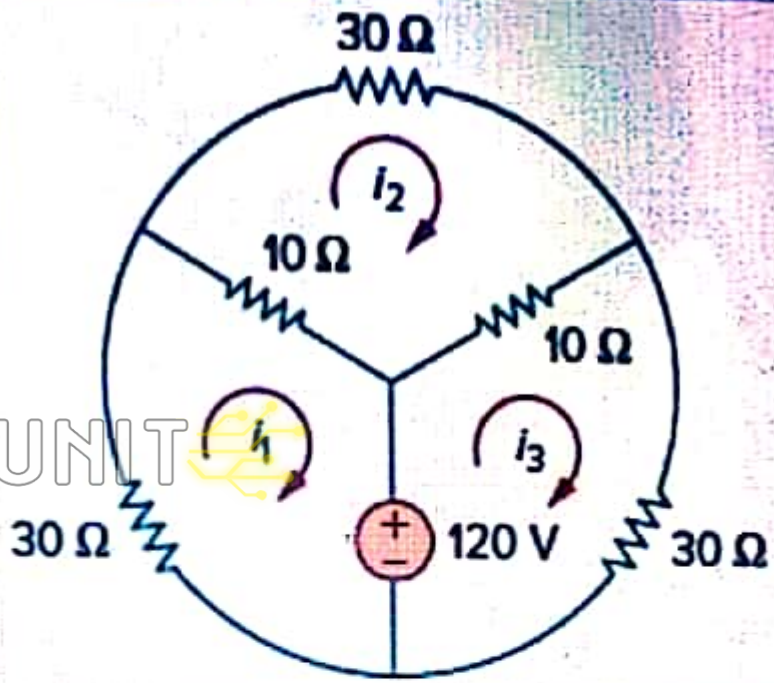
- $0.8\ A$
- $0.5\ A$
- $3\ A$
- $0.14\ A$
- $-0.9\ A$

3



For the circuit shown in the figure, if R1=1 KΩ, R2 =2 KΩ, R3=3 KΩ, Vs1=5 V, Vs2=-11 V, find I1 using mesh analysis.

Section



8

Write the mech currents in the simplified forms
(3 Points)

Enter your answer

2. Find the mesh current equations for the circuit shown: * (3 Points)

- $12i_1 - 2i_2 = 12$ *and* $-2i_1 + 7i_2 = -4$
- $10i_1 + 2i_2 = 12$ *and* $2i_1 - 7i_2 = -14$
- $2i_1 - 12i_2 = 2$ *and* $-7i_1 + 2i_2 = 4$
- $8i_1 - 4i_2 = 7$ *and* $-12i_1 + 3i_2 = -5$
- $5i_1 + 2i_2 = 12$ *and* $-6i_1 + 7i_2 = -25$

3. For the circuit shown, and based on the superposition principle, the portion of the current i_x under the effect of the 3.5 V voltage source acting alone is: *

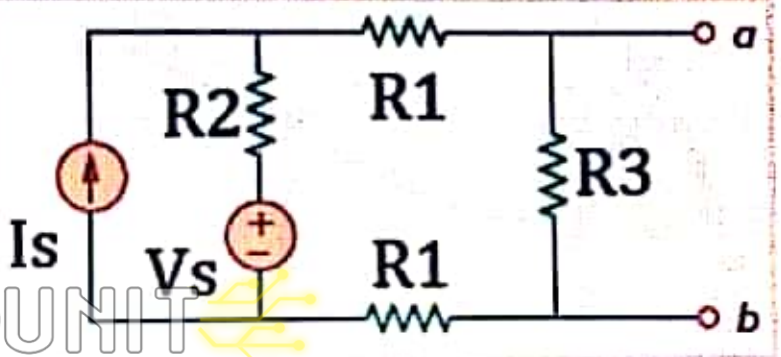
- 0.14 A
- − 0.9 A

4. Using the principle of source transformation, convert the given circuit into a single node circuit with current source i (with direction from node b to node a) in parallel with resistor R and connected between nodes a and b. Find i and R? * (3 Points)

- $i = -6\,A, \quad R = 2.182\,\Omega$
- $i = -2\,A, \quad R = 2.182\,\Omega$
- $i = 2\,A, \quad R = 2.182\,\Omega$
- $i = -2\,A, \quad R = 1.356\,\Omega$
- $i = 6\,A, R = 1.356\,\Omega$

5. The circuit shown has: A

Answer the following questions:



Take: R1=12Ω, R2=6Ω, R3=15Ω, Vs=18V, Is=3A

5

Find the Norton resistance
(1 Point)

Enter your answer

6

The Thevenin voltage.

10

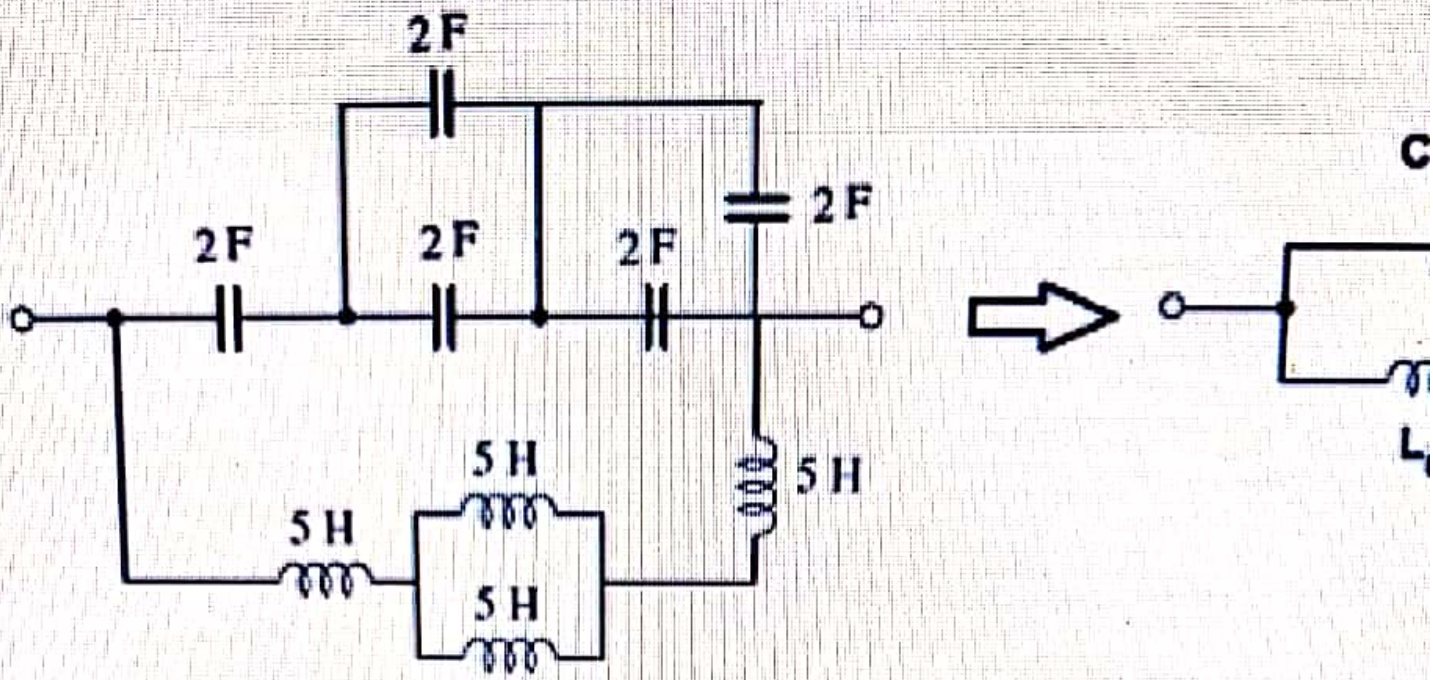
How many branches are there
(1 Point)

- 12
- 20
- 14
- 18
- None of these

Back

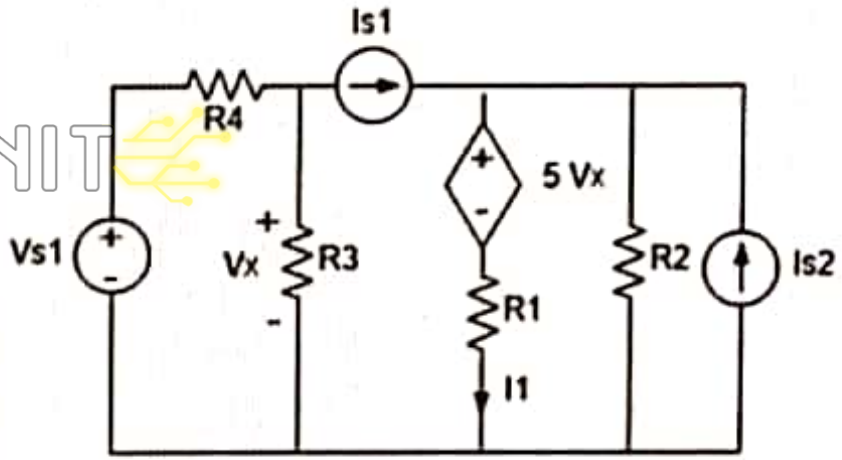
Next

ictor, what are the values of C_{eq} and L_{eq}



- None of the choices
- C_{eq}=1.75 F, L_{eq}=0.1H
- C_{eq}=17.5 F, L_{eq}=1H
- C_{eq}=1F, L_{eq}=17.5 H
- C_{eq}=1.75 F, L_{eq}=1H

4



For the circuit shown in the figure if R1 =8 KΩ, R2 =2 KΩ, R3=3 KΩ, R4=4 KΩ, Vs1=5 V, Is1= 5 A, Is2= 10 A. Find the contribution of Is2 only in the value of I1.

* Required

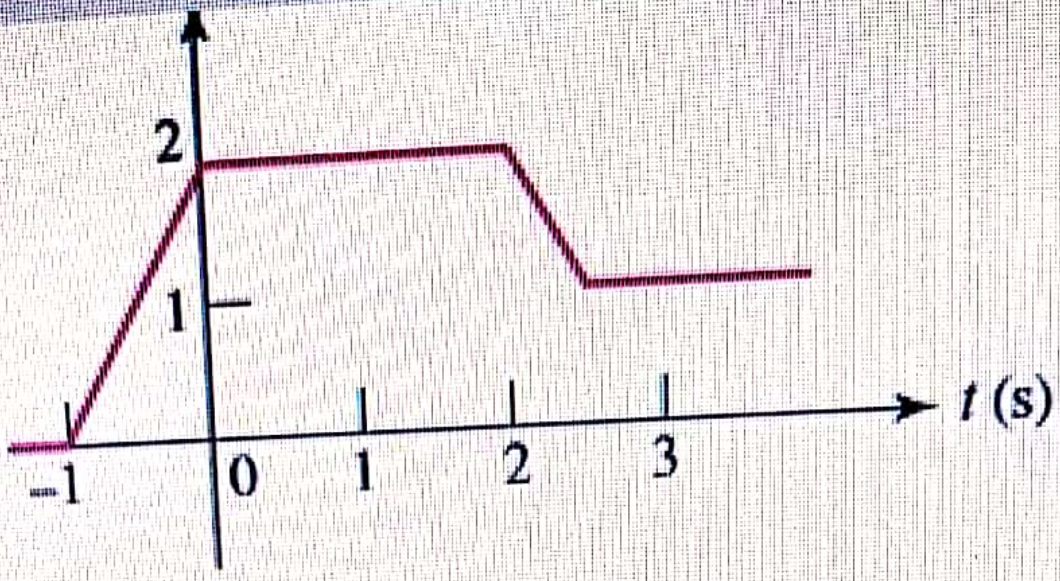
Q1.

Essay Questions (11 points)

3

What is the purpose of a phasor diagram? *

(2 Points)

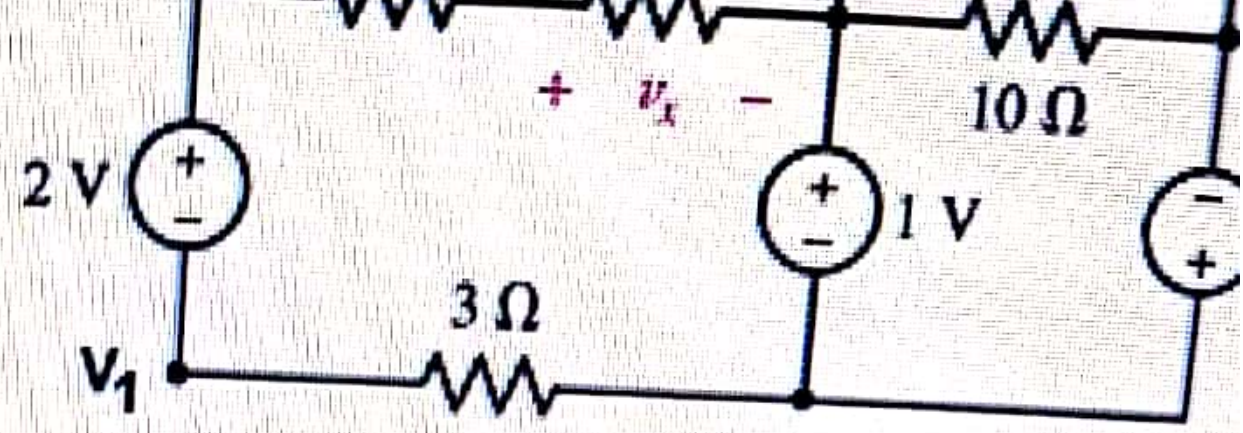


- ○ 0.4
- ○ 400
- ○ .04
- ○ 40
- ○ None of the choices

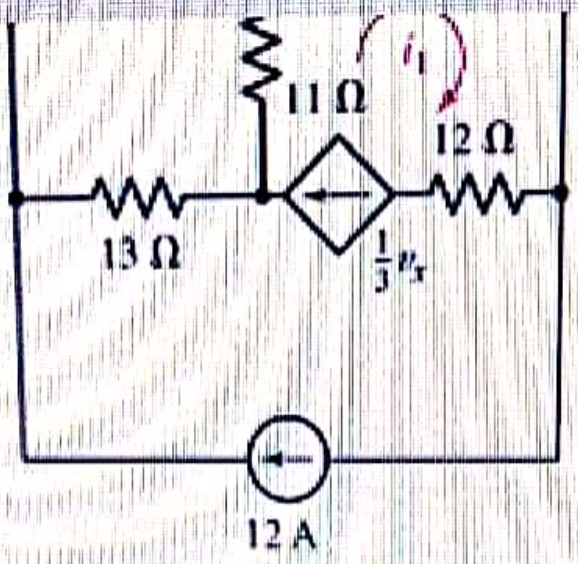
SUBMIT ANSWER

- $\frac{130}{14}\ \Omega$
- $\frac{130}{13}\ \Omega$
- None of the choices
- $\frac{103}{13}\ \Omega$
- $\frac{110}{13}\ \Omega$

SUBMIT ANSWER

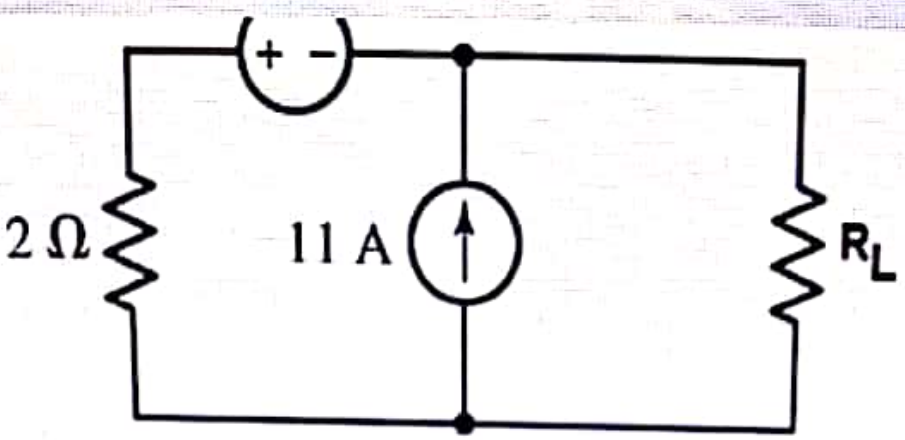


- $\frac{14}{67}$ V
- $\frac{-67}{14}$ V
- $\frac{-14}{67}$ V
- None of the choices
- $\frac{67}{14}$ V



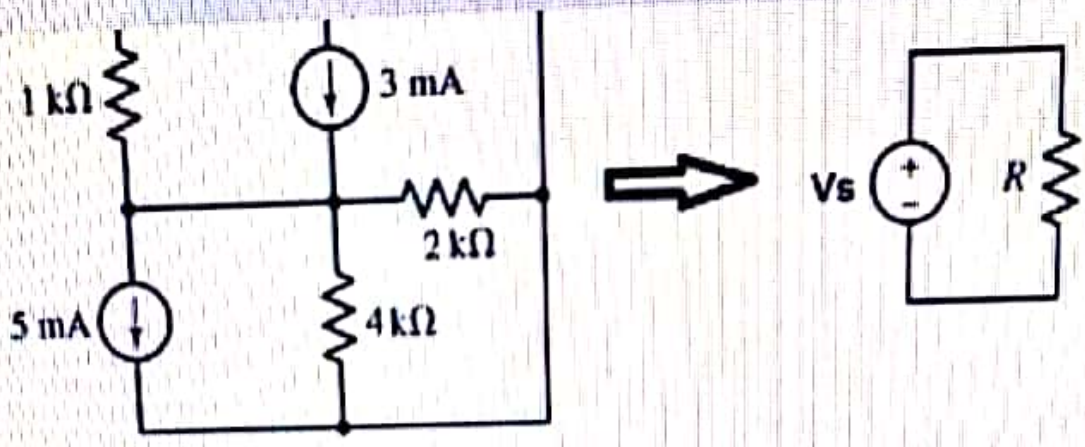
- ○ 3.2 A
- ○ -3.8 A
- ○ 3.8 A
- ○ -3.2 A
- ○ None of the choices

SUBMIT ANSWER



- ○ 1 W
- ○ 3 W
- ○ 0 W
- ○ None of the choices
- ○ 2 W

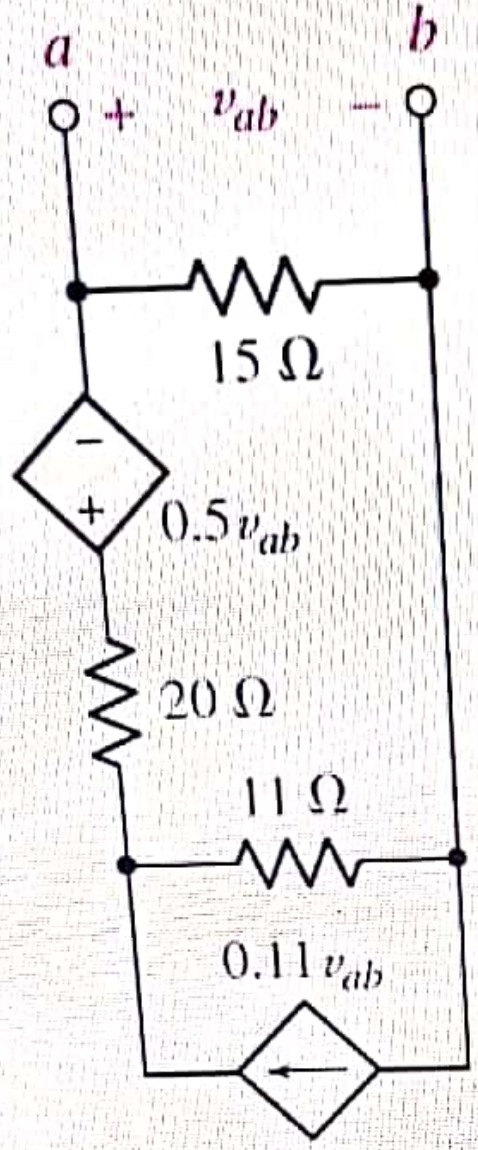
SUBMIT ANSWER



- V_s=-8/7 volts, R= 4/7 KΩ
- None of the choices
- V_s=8/7 volts, R= 4/7 KΩ
- V_s=4/7 volts, R= 8/7 KΩ
- V_s=-4/7 volts, R= 8/7 KΩ

SUBMIT ANSWER

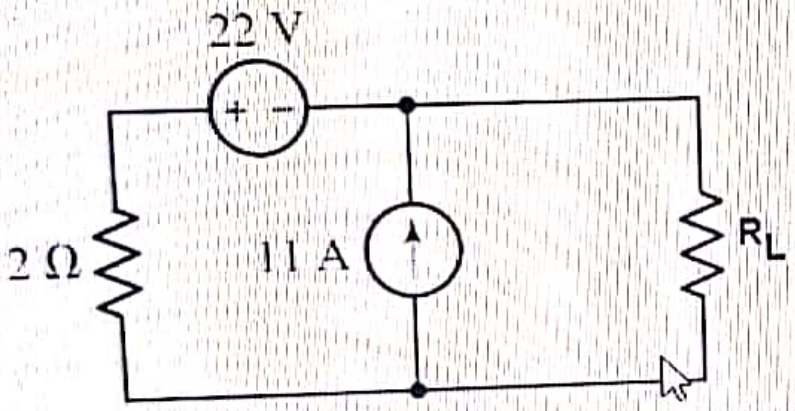
between terminals a and b.



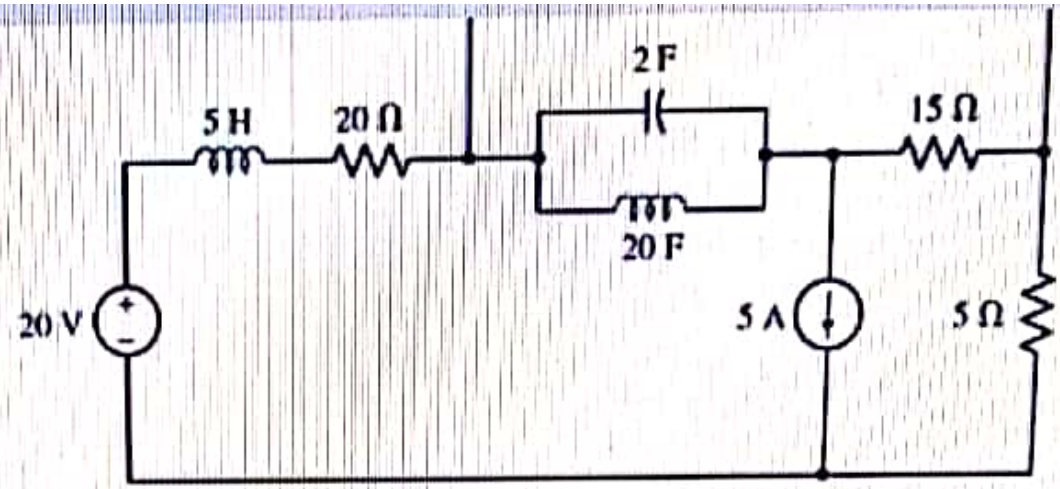
○ $\frac{9300}{707}\Omega$

Question 6/14 (2 p.)

Consider the circuit shown in the figure. What is the maximum power that can be absorbed by R_L from the circuit?



○ 1 W



- ○ 600 W
- ○ 200 W
- ○ 400 W
- ○ None of the choices
- ○ 800 W

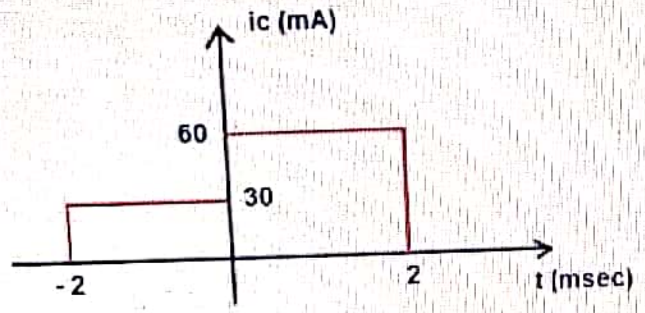
SUBMIT ANSWER

Test name: EE213 Midterm_II

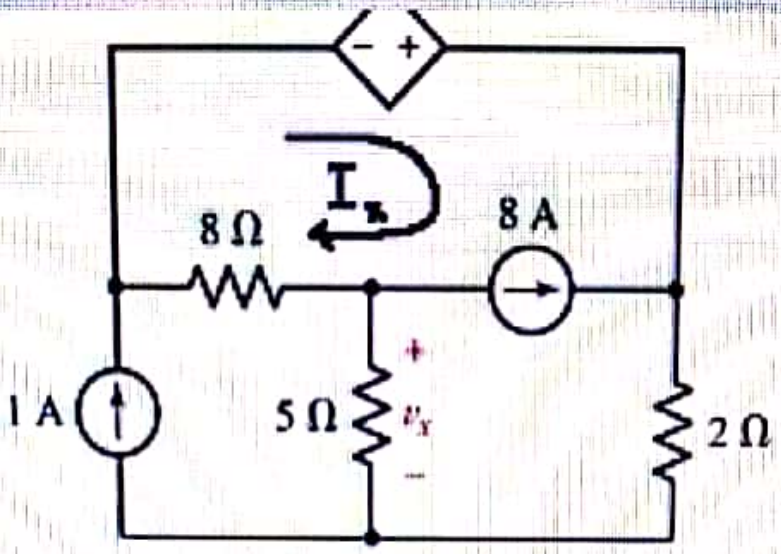
Time left to complete the test: 0 h 47 min. 35 sec.

Question 3/14 (2 p.)

The plot shown in the figure depicts the current through a10 μF capacitor. Find the voltage across the capacitor $v_c(t=0)$, given that $vc(t=-\infty)=0$.

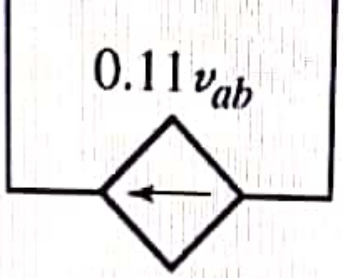


○ 3 V



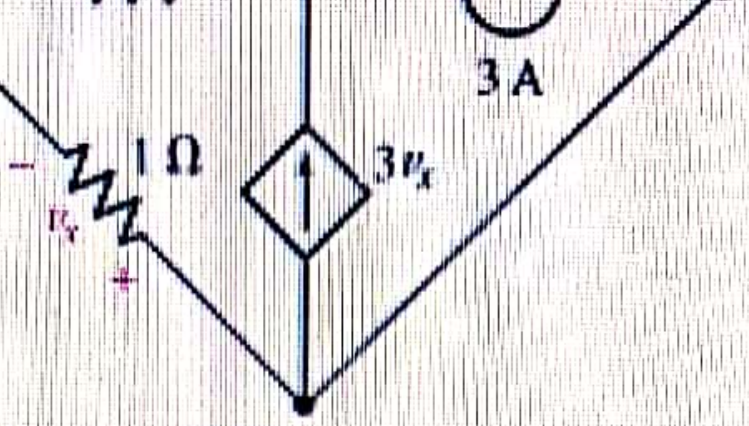
- None of the choices
- 4.25 A
- 4.52 A
- -4.52 A
- -4.25 A

SUBMIT ANSWER



- $\frac{9300}{707}\Omega$
- $\frac{3009}{707}\Omega$
- $\frac{9003}{707}\Omega$
- None of the choices
- $\frac{3900}{707}\Omega$

SUBMIT ANSWER

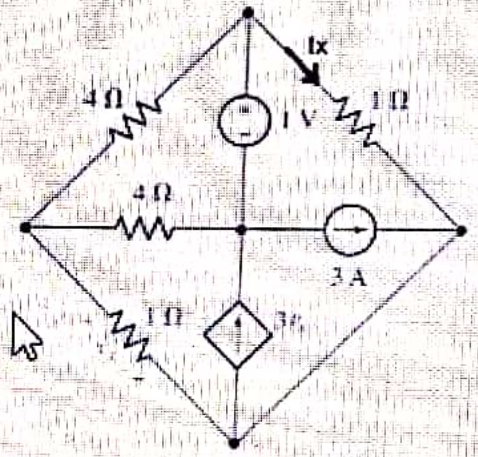


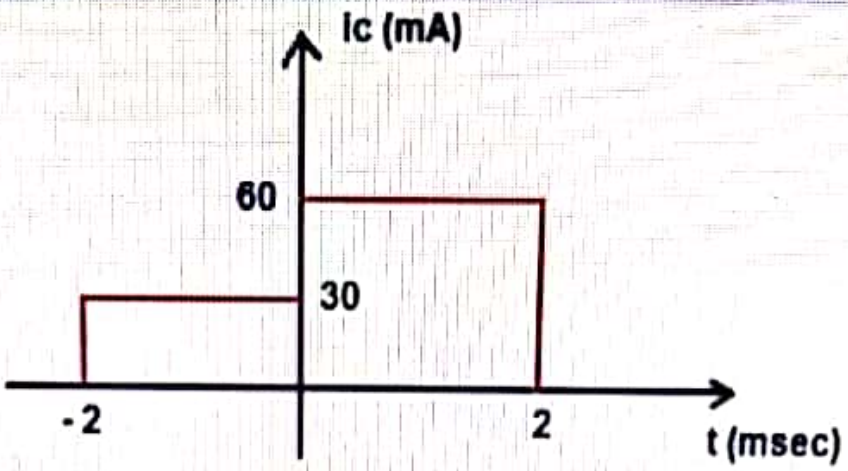
- -7/9 A
- None of the choices
- 7/9 A
- 9/7 A
- -9/7 A

SUBMIT ANSWER

Question 1/14 (2 p.)

Consider the circuit shown in the figure and find the contribution of the current source 3A only on the value of the current I_x

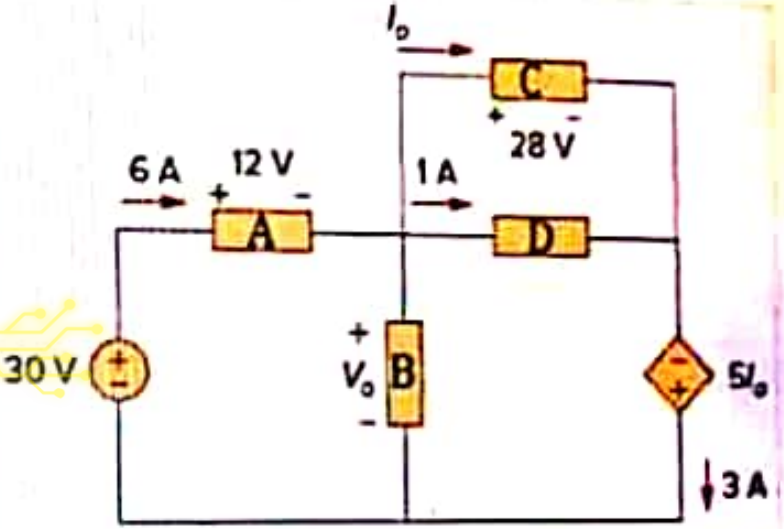




- ○ 3 V
- ○ 60 V
- ○ 30 V
- ○ 6 V
- ○ None of the choices

SUBMIT ANSWER

Answer the following questions

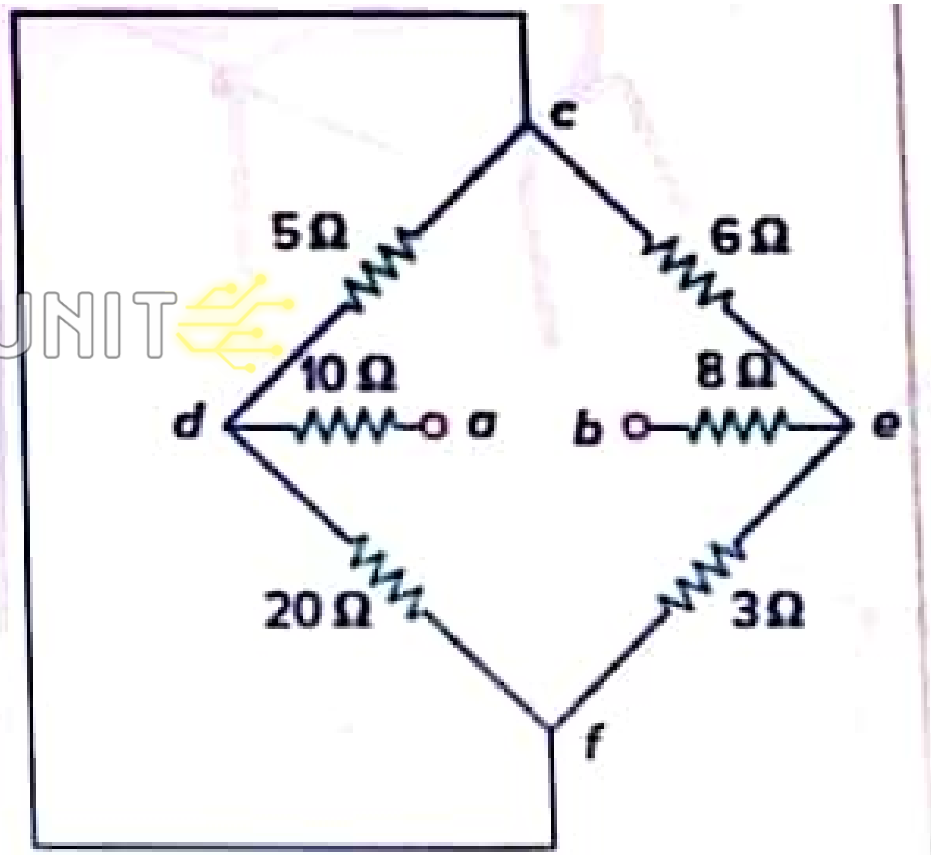


3

Io
(1 Point)

Enter your answer

13



Find the equivalent resistance between 'c' and 'f' terminals
(1 Point)

$I = 6\,A, R = 1.356\,\Omega$

5. The circuit shown has: * (2 Points)

- 4 meshes.
- 3 meshes and 1 supermesh.
- 2 meshes and 1 supermesh.
- 2 supermeshes and 1 mesh
- Cannot be determined

Submit