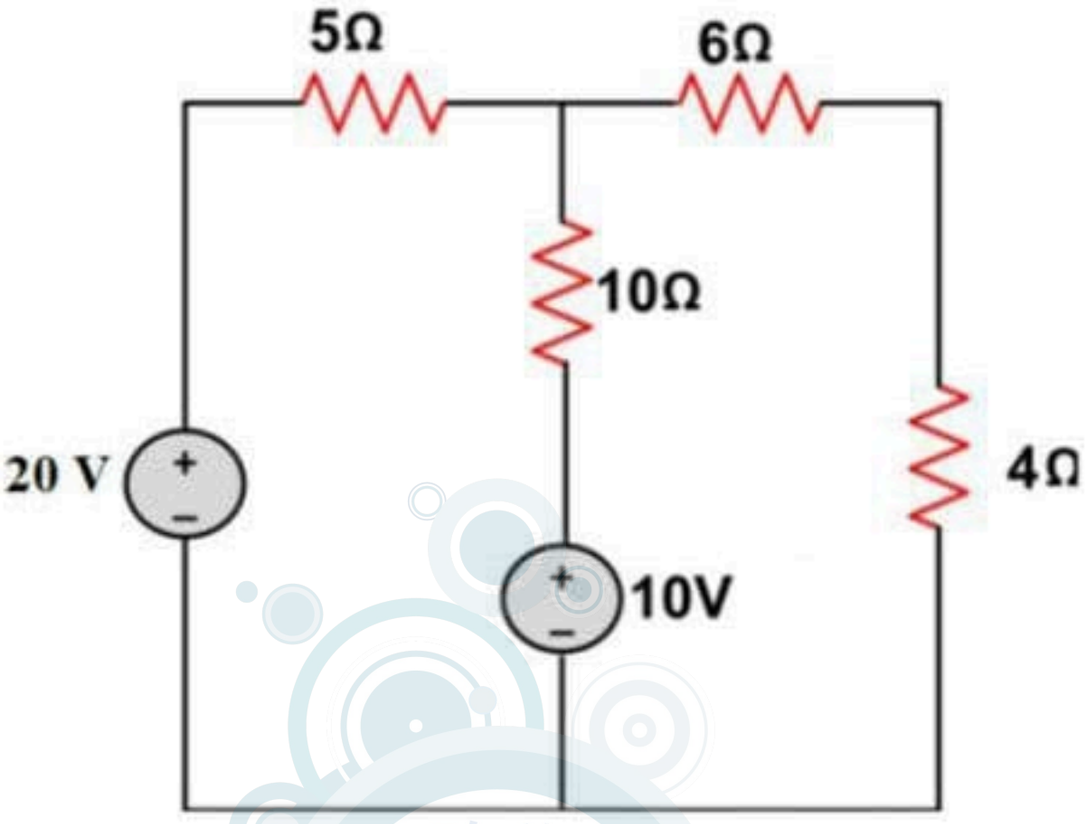
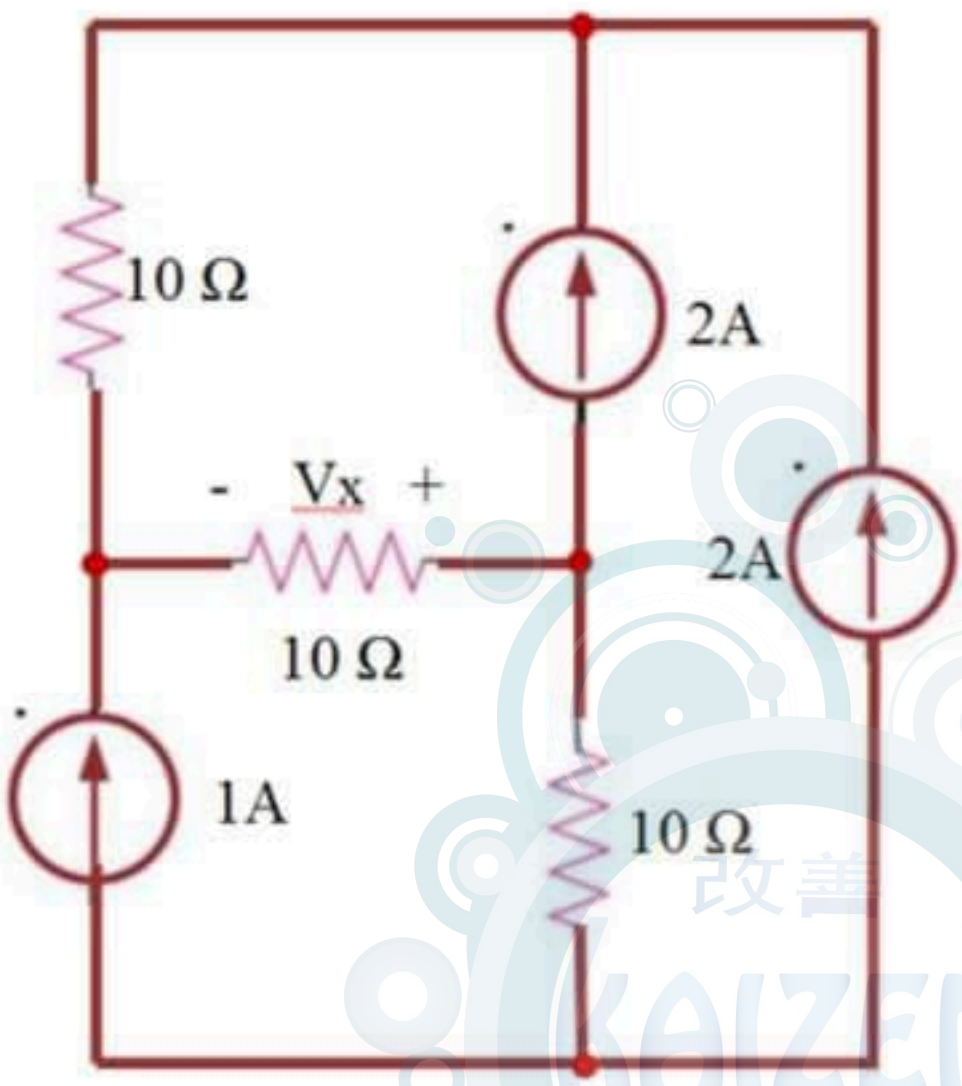
The power in (W) of the 10 V voltage source is



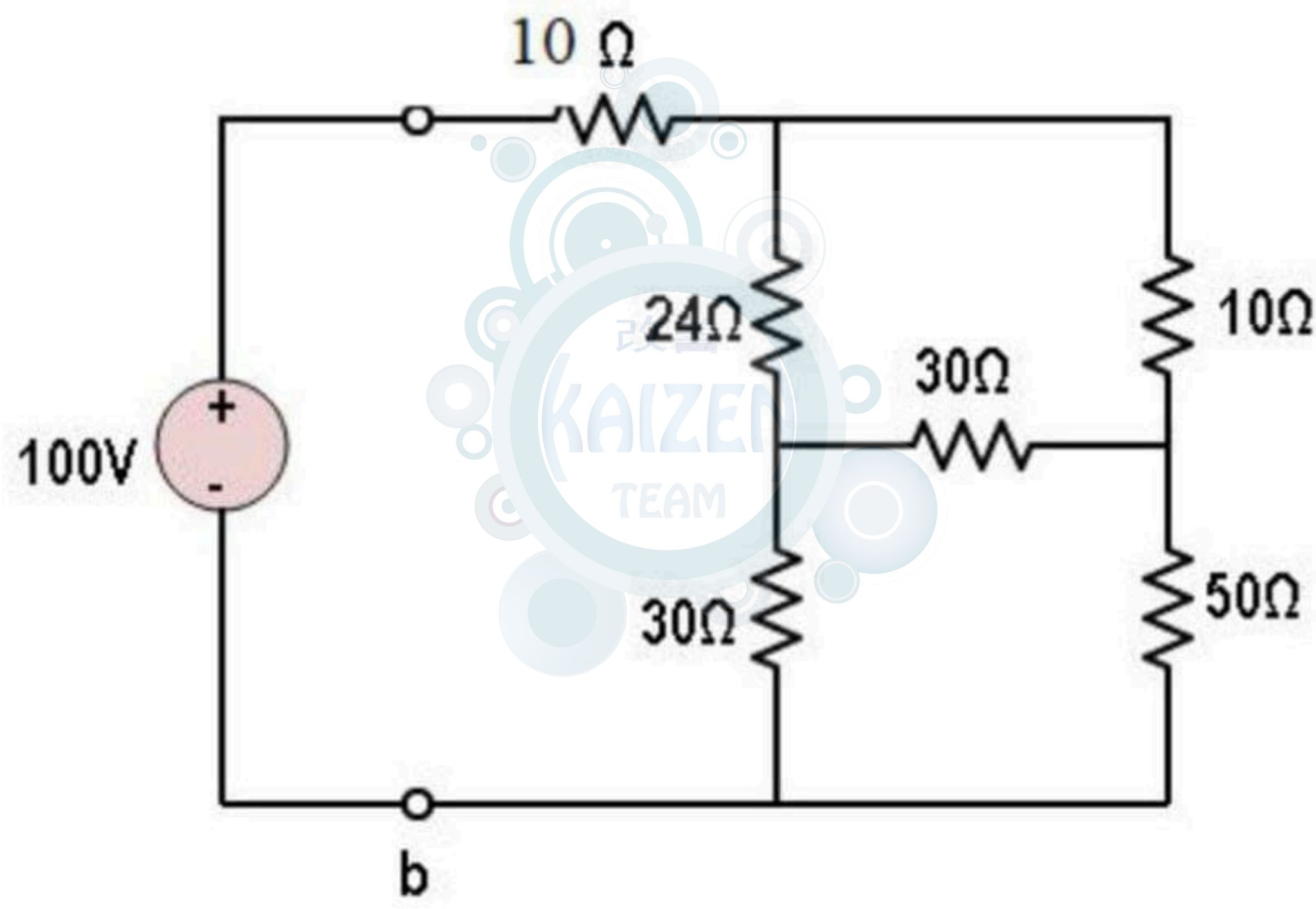
- 12.5
- 2.5
- 10
- 5
- 7.5

For the circuit shown below, the value of Vx (V) is:

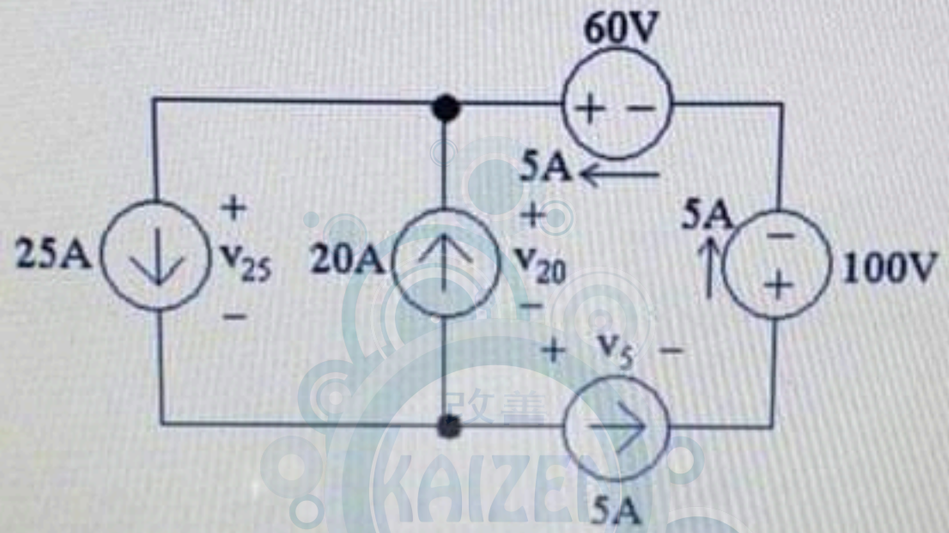


- -70
- -80
- 60
- -50
- 50

Find R_{ab} in (ohm)



The values of V_{25}, V5,V_{20} are given respectively

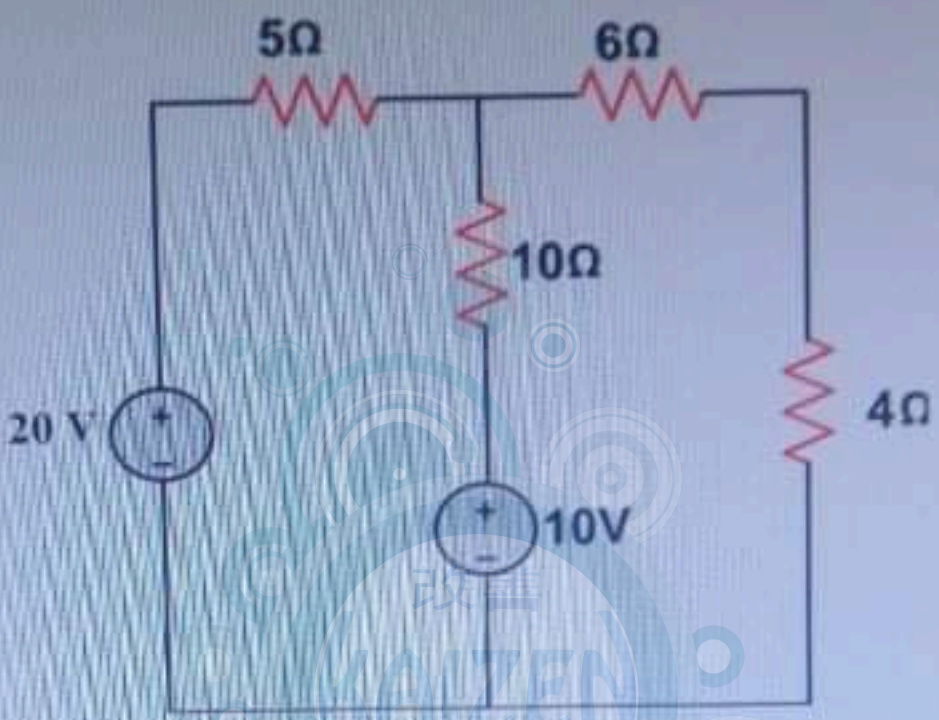


Zoom image

- 50,25,-25
- 200,100,100
- -200,10,100
- 300,150,-160
- 40, -80, 40
- -100, 50,50

Question 1/5

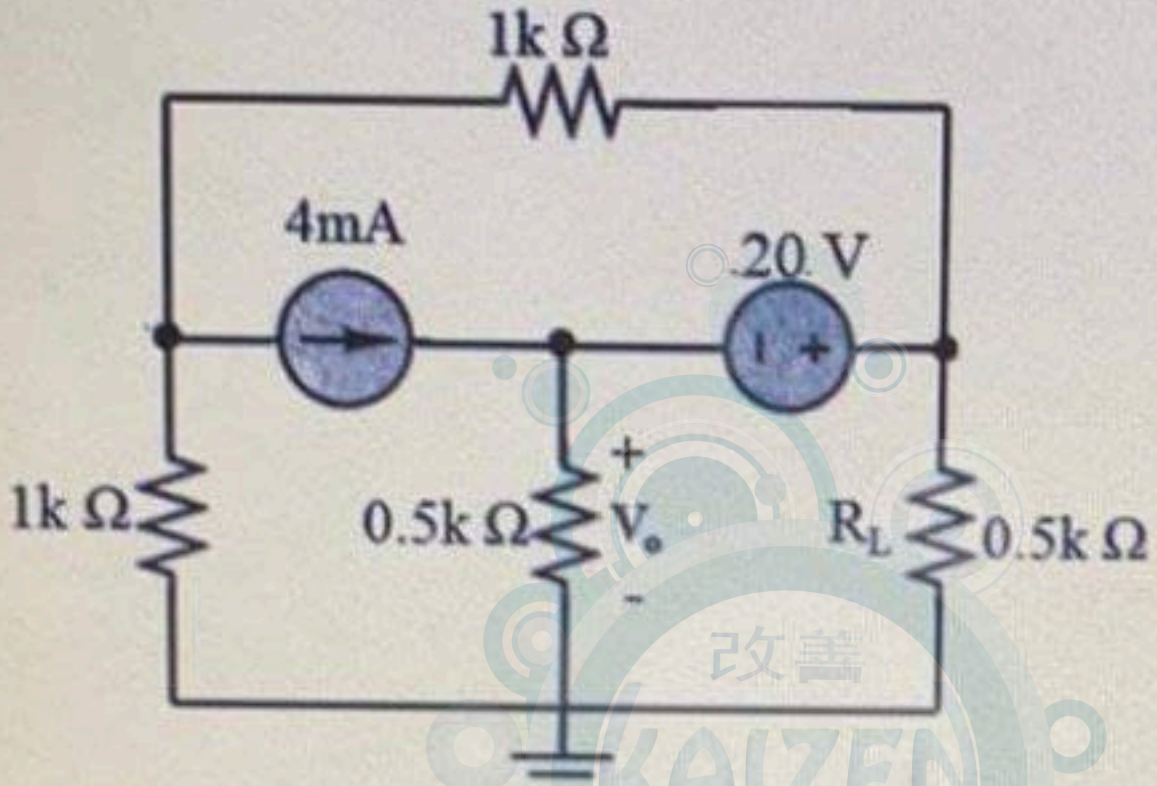
The power in (W) of the 10 V voltage source is



- 2.5
- 5
- 10
- 12.5
- 7.5

SUBMIT ANSWER

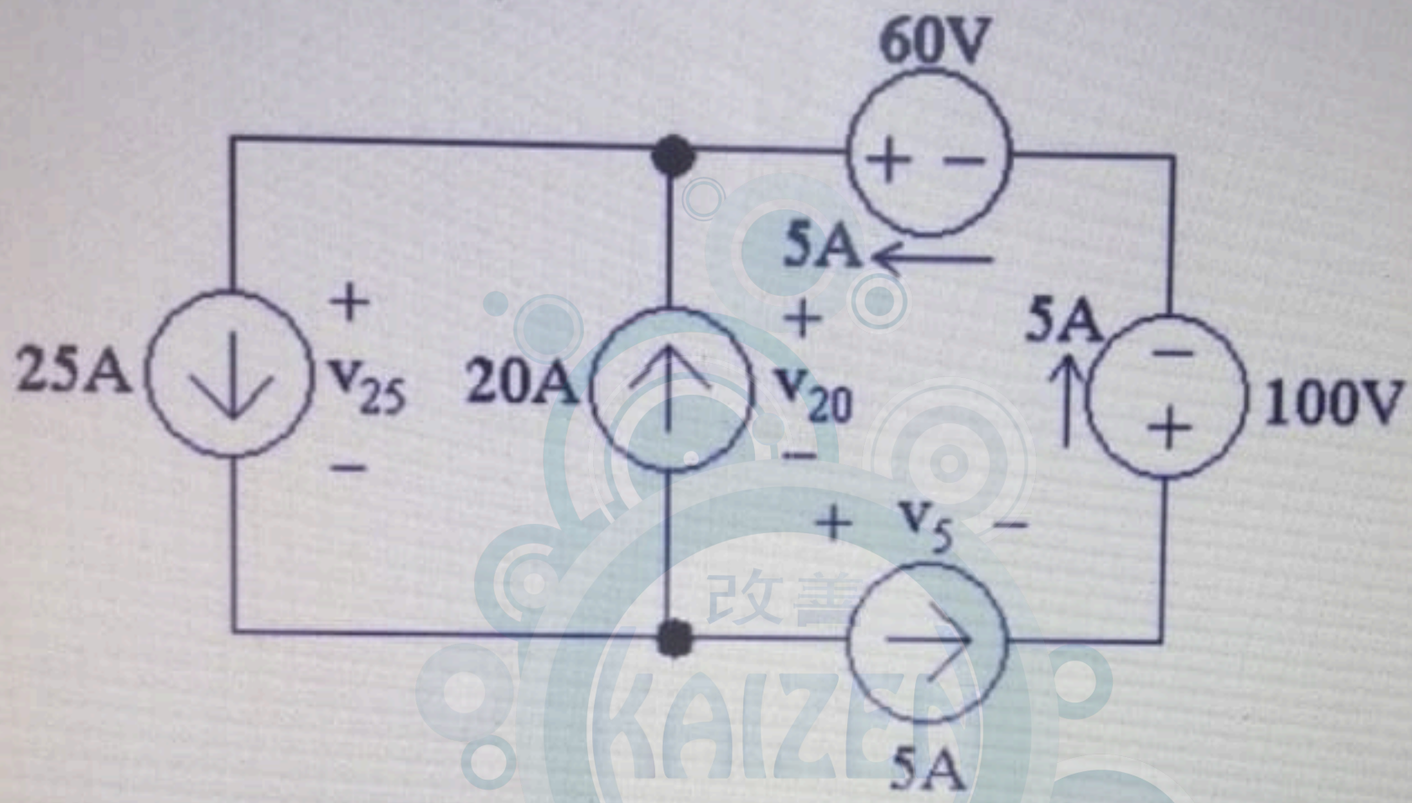
For the circuit shown below, the value of Vo (V) is:



- ○ -10.7
- ○ -2.33
- ○ -7.9
- ○ -13.4

Question 1/5

The values of V_{25}, V5,V_{20} are given respectively

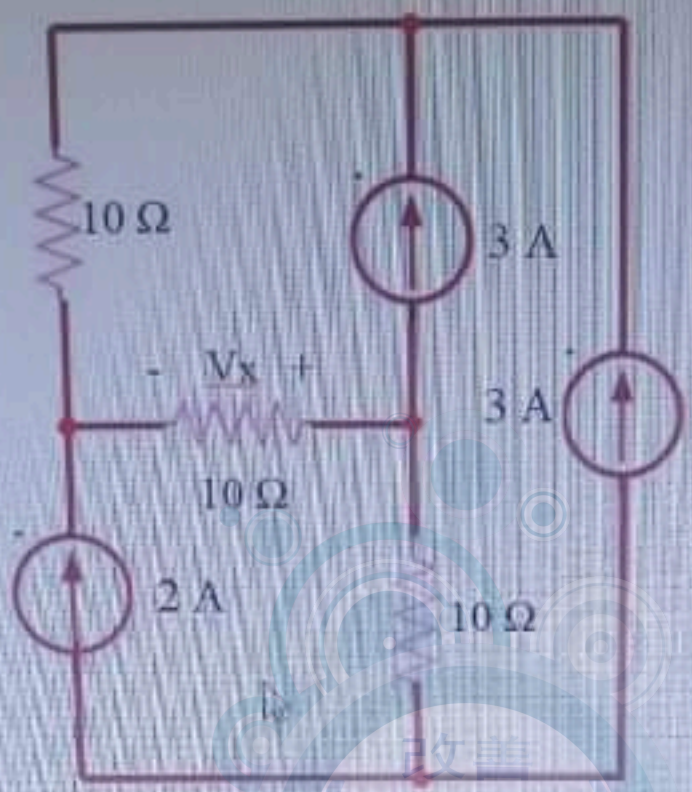


Zoom image

- 200.100,100
- 50,25,-25
- -200.10,100
- -100, 50,50
- 300,150,-160

Question 3/5

For the circuit shown below, the value of Vx (V) is:

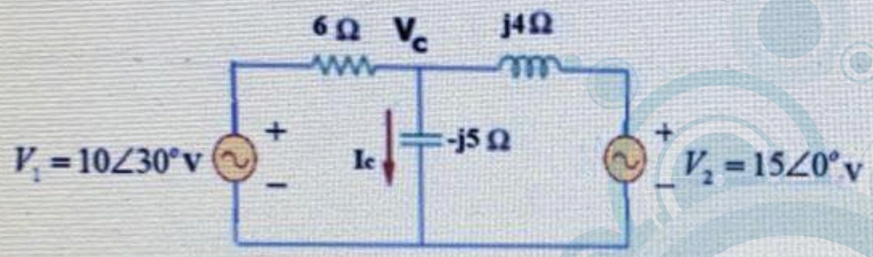


- 50
- 60
- 70
- 80
- 50

SUBMIT ANSWER

Question 4/5 Answer is mandatory

Find Ic(A)and Vc(V)respectively, for the circuit shown.



- ☐ $Ic = 2.7343 + j2.5523, Vc = 12.7615 - j13.6716$
- ☐ $Ic = 0.9870 + j1.2377, Vc = 7.4262 - j5.9221$
- ☐ $Ic = 1.7737 - j2.6916, Vc = -2.6916 - j1.7737$
- ☐ $Ic = 1.9375 + j1.0677. Vc = 5.3386 - j9.6875$
- ☐ $Ic = 2.0000 + j1.7320. Vc = 8.6600 - j10.0000$

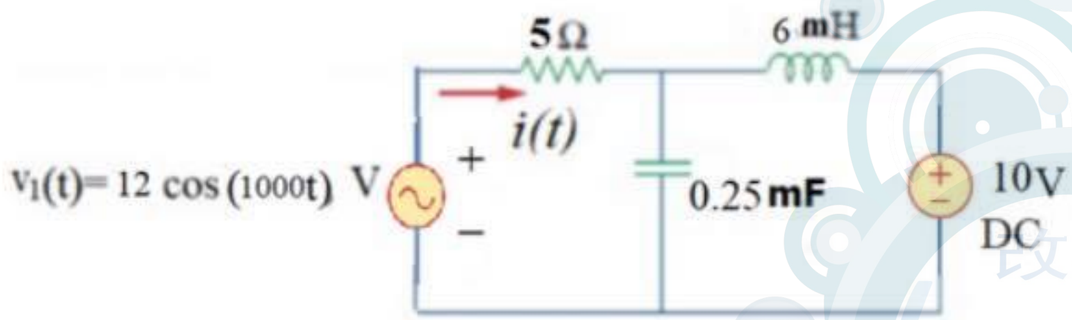
SUBMIT ANSWER

Test name: EE 203 - Quiz 2 - For students

Time left to complete the test: 0 h 22 min. 24 sec.

Question 1/5 Answer is mandatory

What is the expression of i(t) in (A) in the circuit shown.



- [ ] $0.8944\cos(1000t + 63.4^\circ) - 2$
- [x] $0.9231\cos(1000t + 67.38^\circ) - 2$
- [ ] $2.8673\cos(1000t - 17.1^\circ) - 2$
- [ ] $1.44\cos(1000t - 53.13^\circ) - 2$
- [ ] $0.96\cos(1000t + 53.13^\circ) - 2$

SUBMIT ANSWER

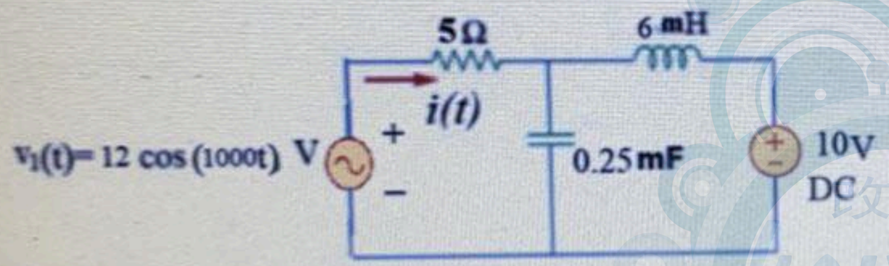
testportal

Test name: EE 203 - Quiz 2 - For students

Time left to complete the test: 0 h 24 min. 46 sec.

Question 1/5 Answer is mandatory

What is the expression of i(t) in (A) in the circuit shown.

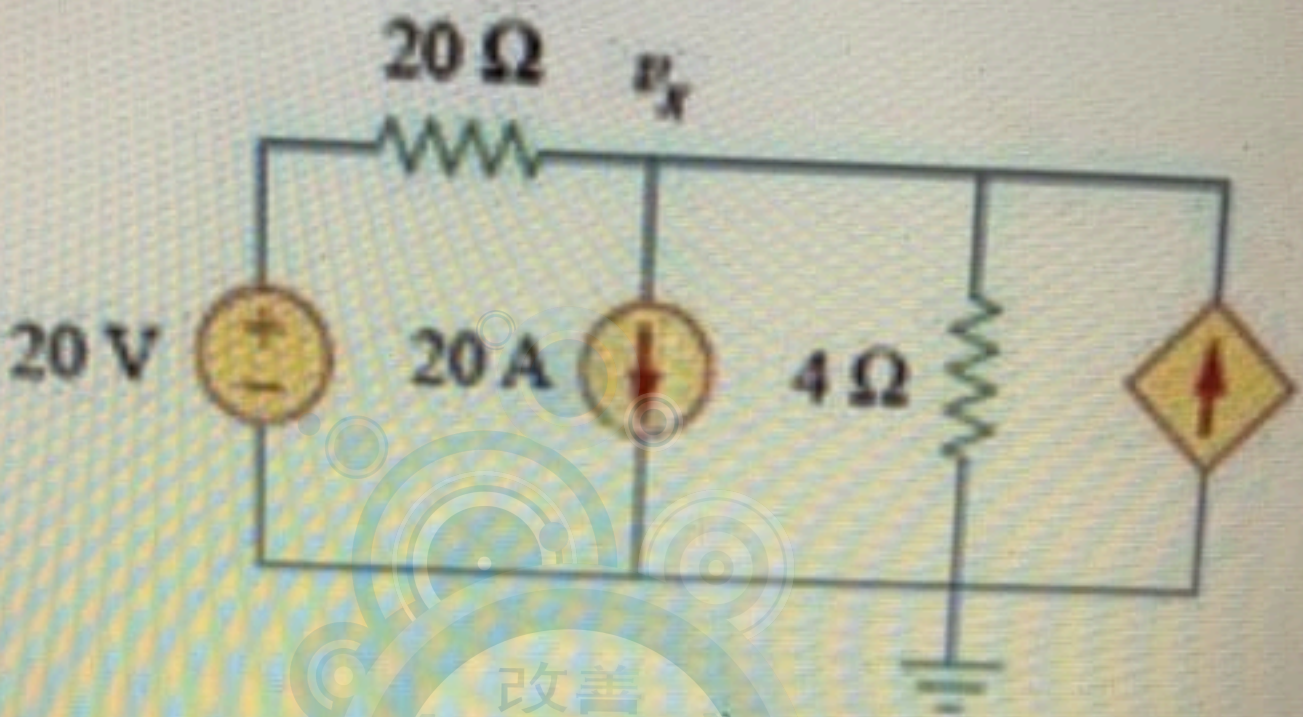


- ☐ $0.9231\cos(1000t + 67.38^\circ) - 2$
- ☐ $2.8673\cos(1000t - 17.1^\circ) - 2$
- ☐ $0.8944\cos(1000t + 63.4^\circ) - 2$
- ☐ $0.96\cos(1000t + 53.13^\circ) - 2$
- ☐ $1.44\cos(1000t - 53.13^\circ) - 2$

SUBMIT ANSWER

Question 10/15 Answer is mandatory

Using the superposition principle, the voltage V_x under the eff



- 100 V
- 100 V
- 5 V
- 5V

MacBook Air

In the circuit shown in Figure. 9. the current $I_0 =$

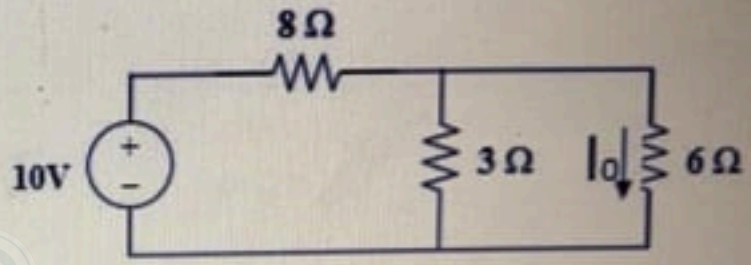
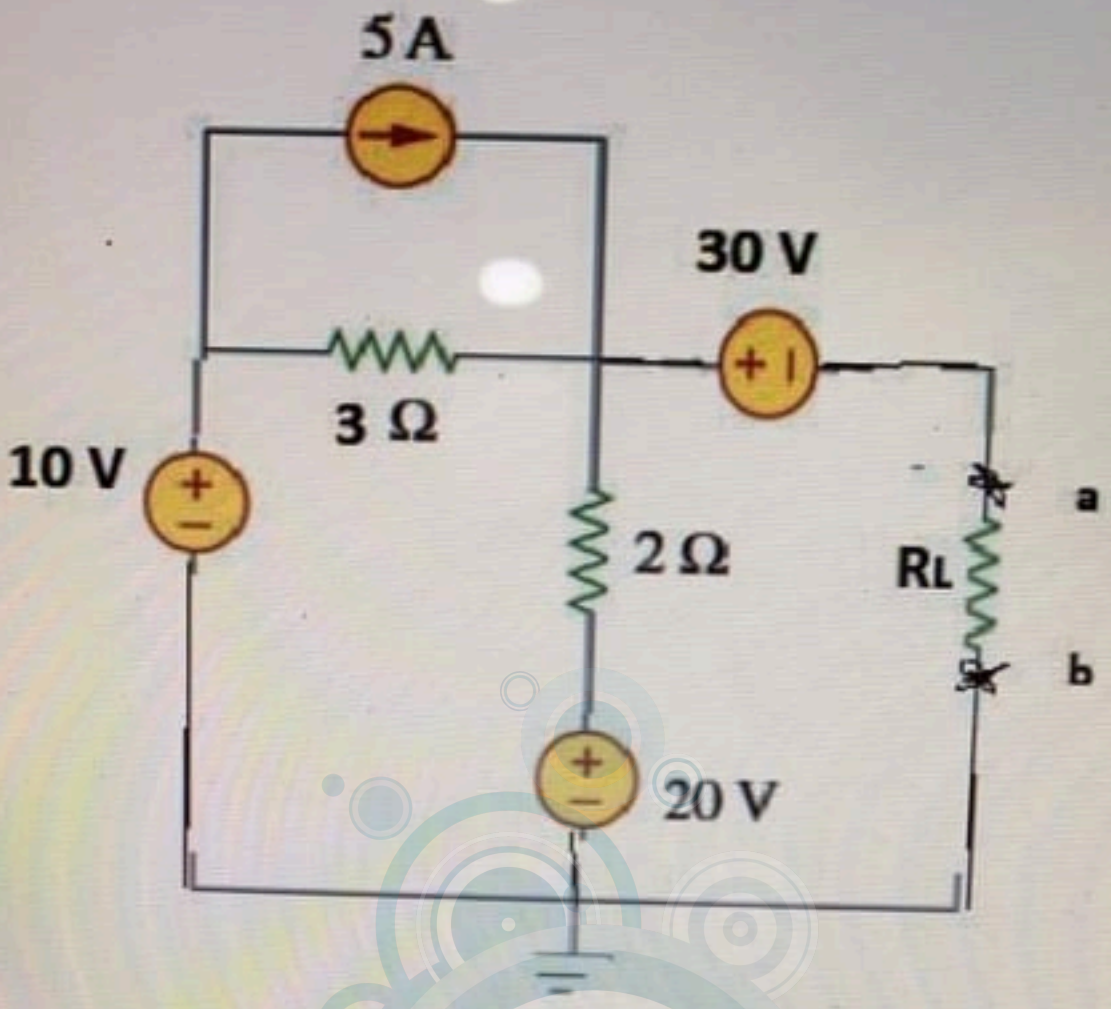


Figure 9:

Zoom image

- ○ - 1.66 A
- ○ 1.66 A
- ○ - 1.33A
- ○ 0.33 A



- 8 V

8 V

52 V

- 52 V

20

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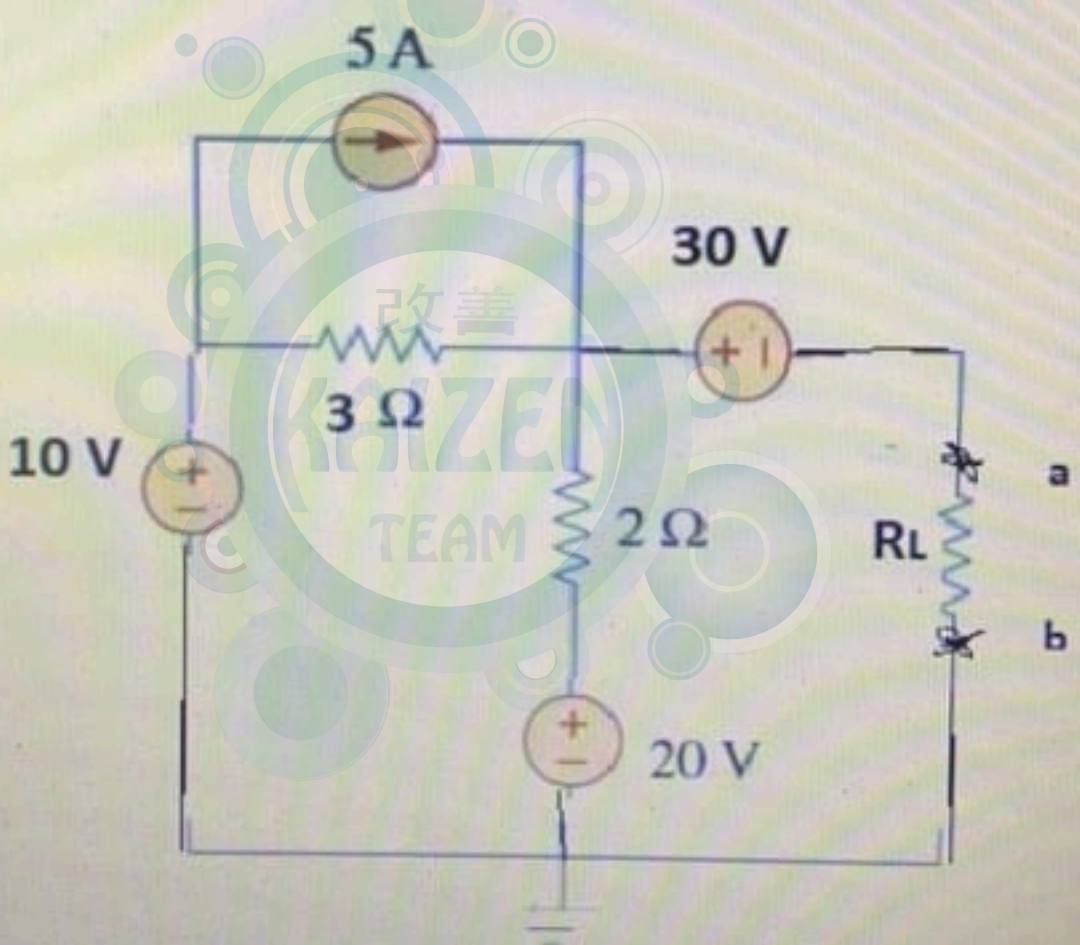
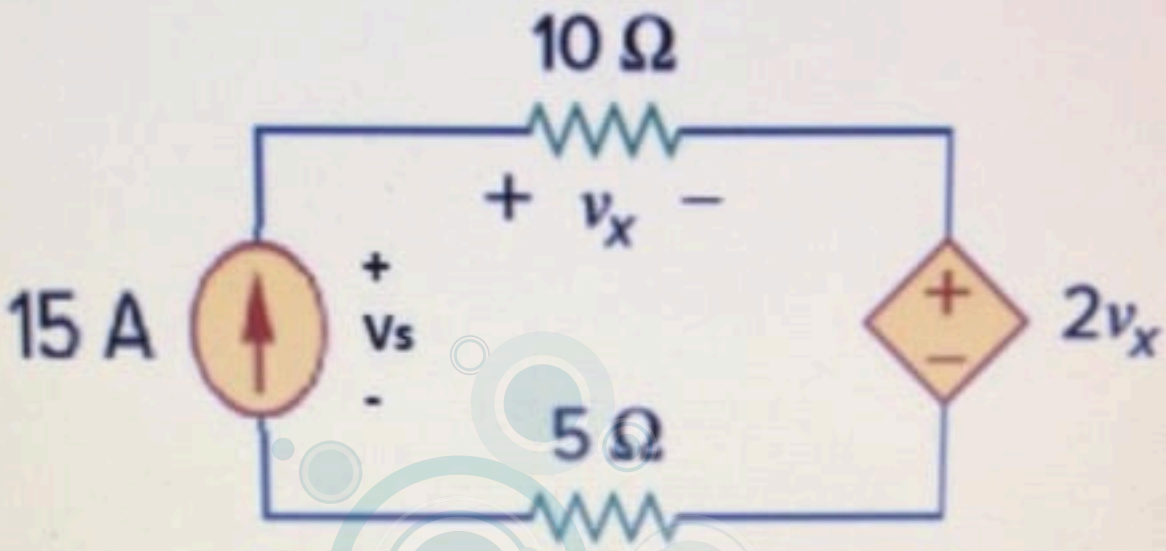
Question 2/15 Answer is mandatory

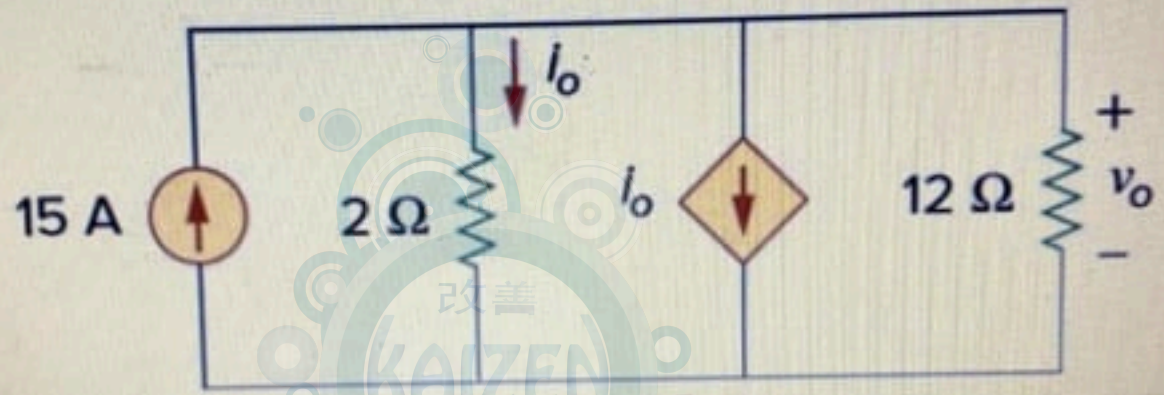
V_{th} as seen between a and b is equal to:



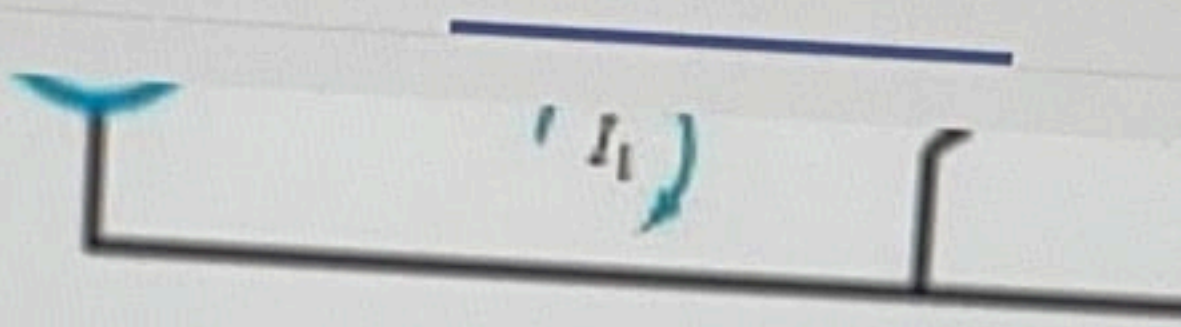


- 15 V
- 525 V
- 150 V
- - 525 V
- - 150 V

In the circuit shown i_o is equla to



- 6.92 A
- 4.35
- -10.3
- 1.3

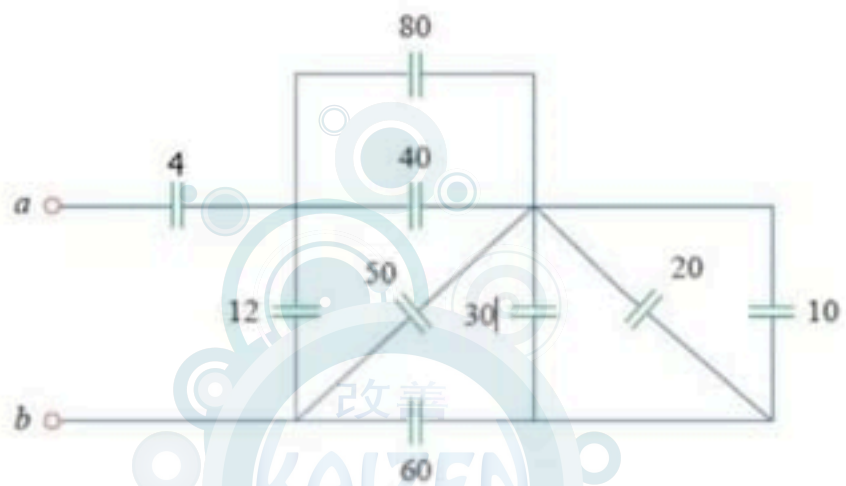


- ○ $I_2 - 3I_4 = 0$
- ○ $2I_1 - I_2 + 2I_4 = 0$
- ◉ $2I_1 + I_2 - I_3 - 2I_4 = 0$
- ○ $I_1 - I_3 - 2I_4 = 0$
- ○ None of these

SUBMIT ANSWER

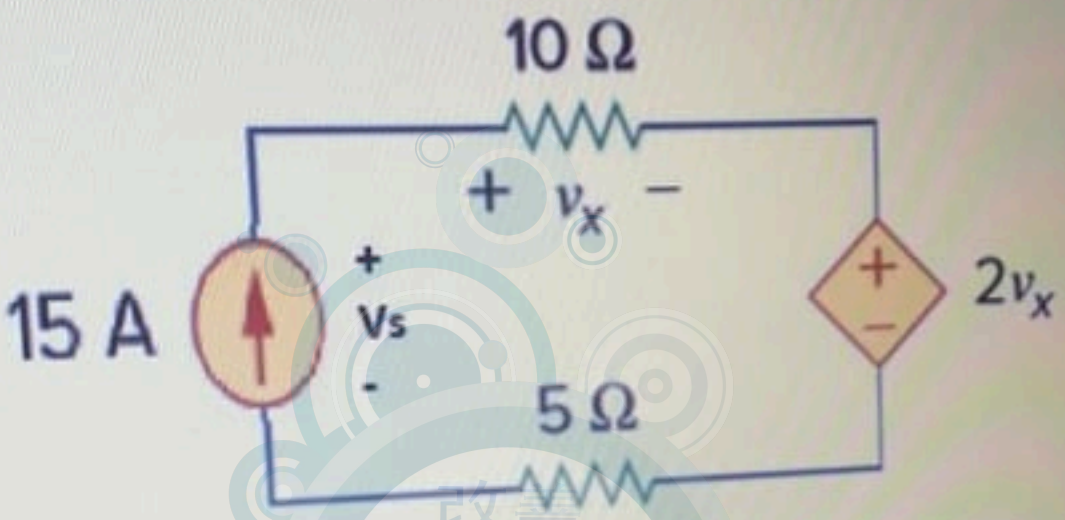
Question 9/15 Answer is mandatory

Find the equivalent capacitance between terminals a and b in the circuit shown. (**All capacitances are in mF**)

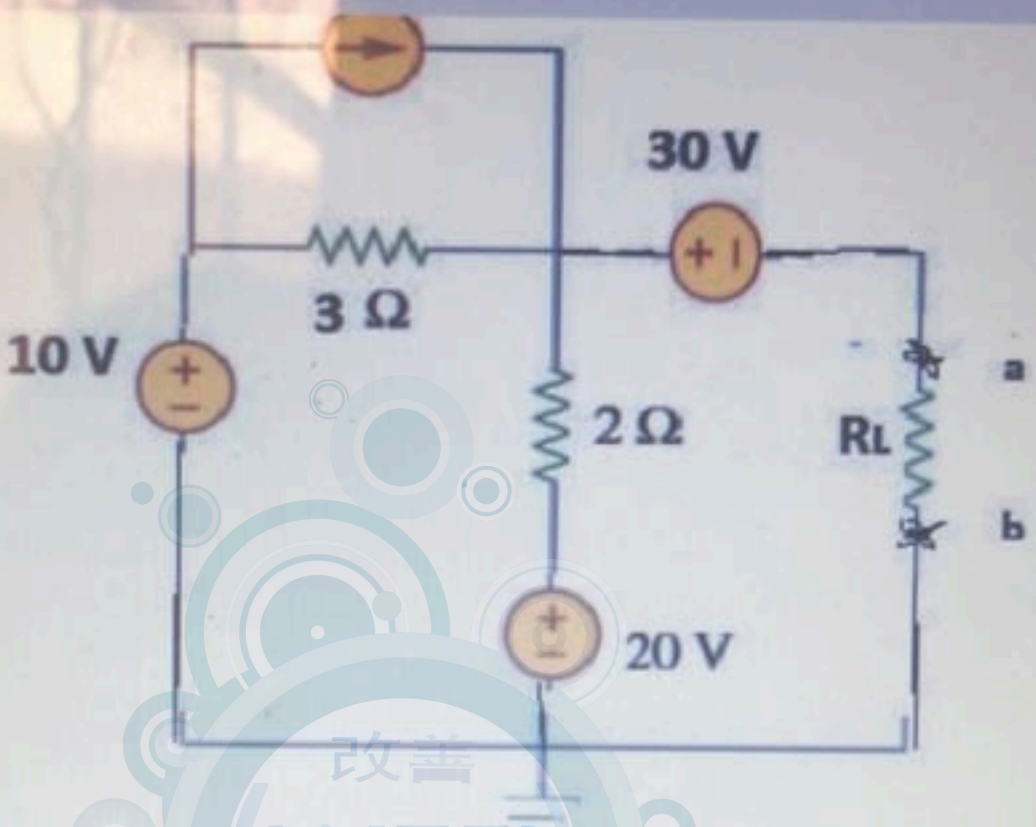


- 1.25 mF
- 3.75 mF
- 10 mF
- 12.5 mF
- 16 mF

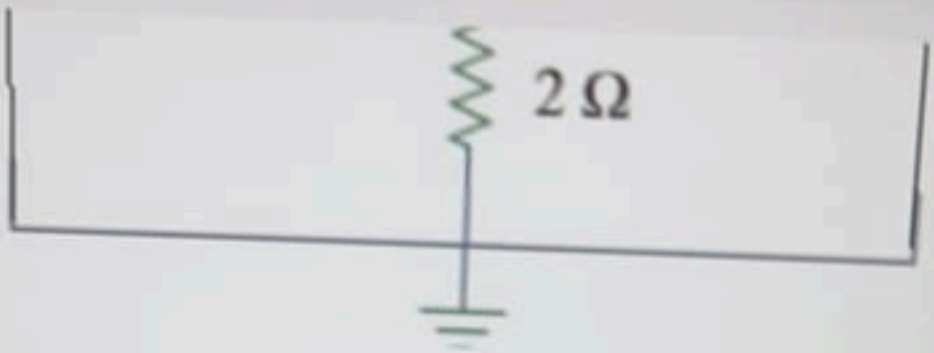
In the circuit shown, V_s equal to



- 15 V
- 525 V
- 150 V
- - 525 V

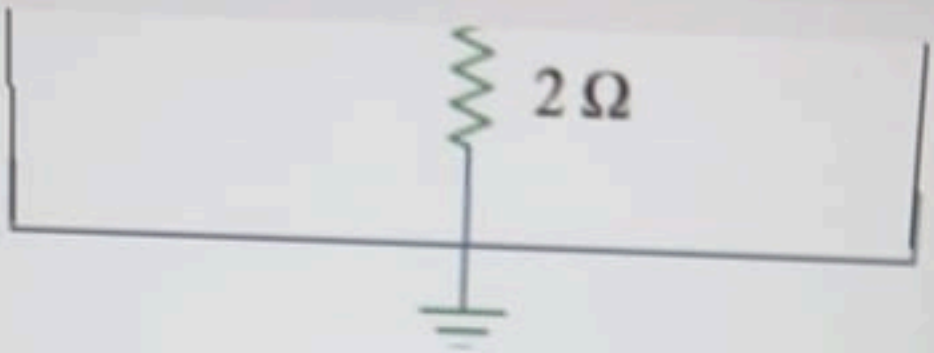


- 2.2
- 3.6
- 1.2
- 5.1



- (●) 6.57 V
- ( ) - 6.57 V
- ( ) 2.15 V
- ( ) -2.15 V
- ( ) 10 V

SUBMIT ANSWER



- (●) 6.57 V
- ( ) - 6.57 V
- ( ) 2.15 V
- ( ) -2.15 V
- ( ) 10 V

SUBMIT ANSWER

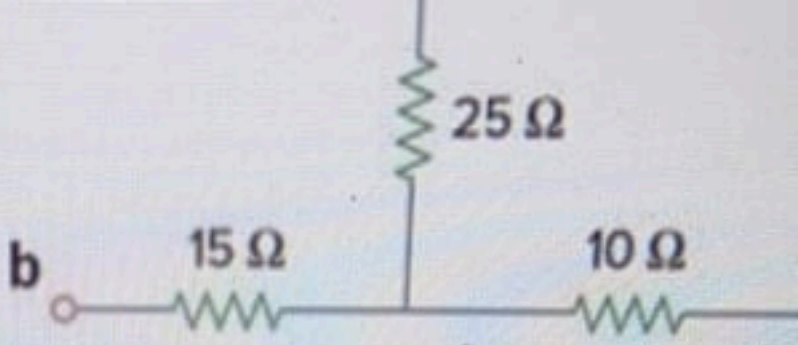


Figure 7:

Zoom image

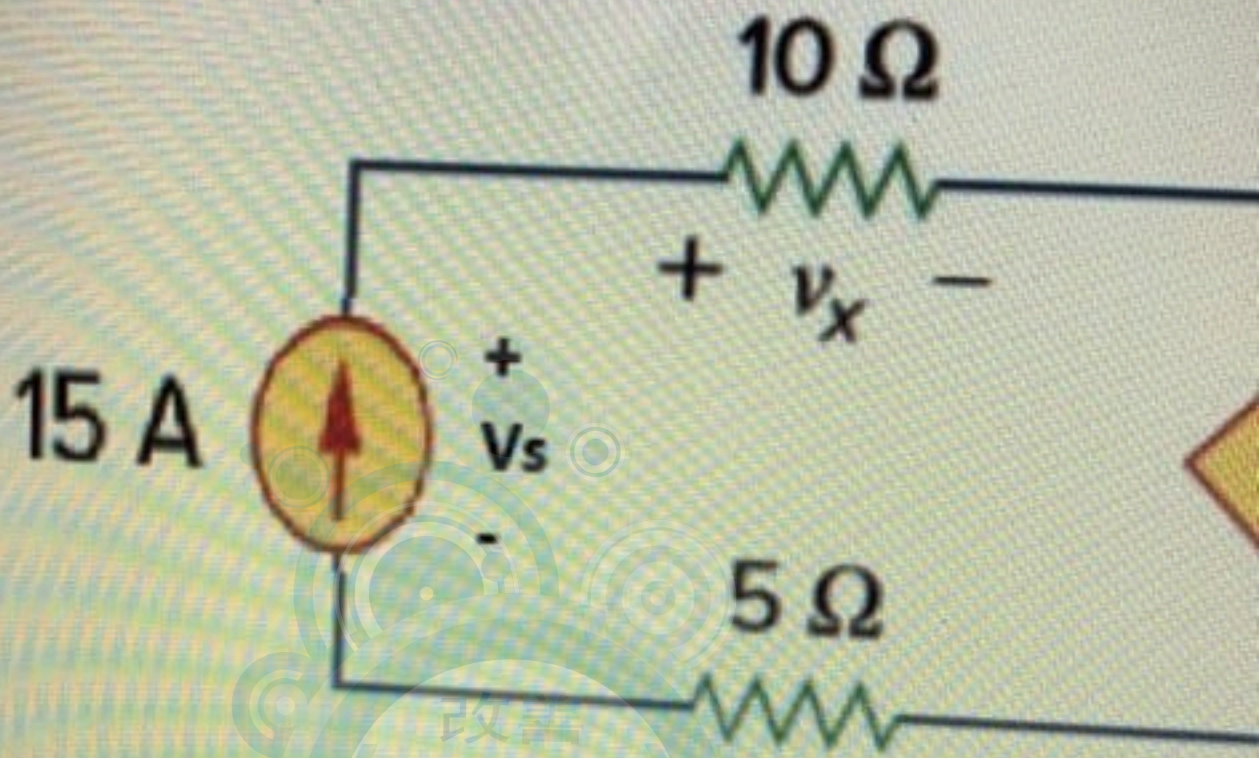
- 22.5 Ω
- 32.5 Ω
- 15 Ω
- 41.45 Ω
- 16.3 Ω

SUBMIT ANSWER

Submit answer

Question 4/15 Answer is mandatory

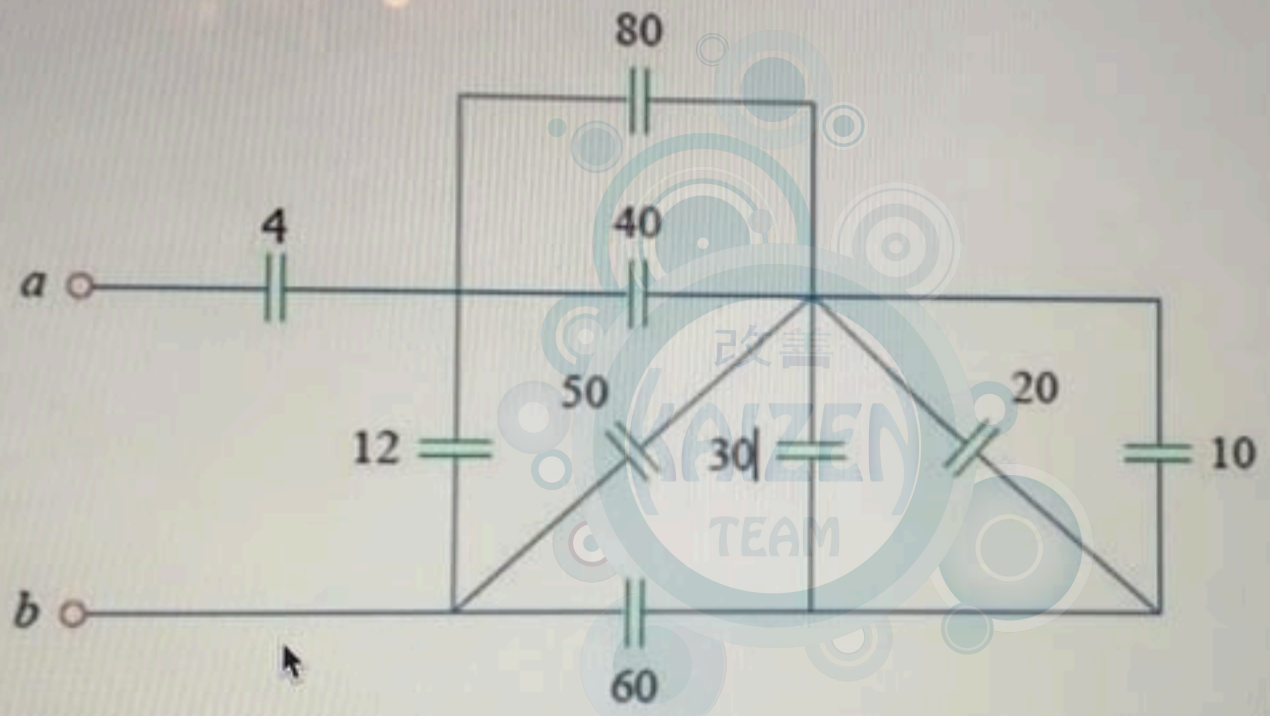
In the circuit shown, V_s equal to



- ○ 15 V
- ◉ 525 V
- ○ 150 V

Question 9/15 Answer is mandatory

Find the equivale..t capacitance between terminals a and b in the circuit shown. **(All capacitances are in mF)**



- ○ 1.25 mF
- ◉ 3.75 mF

Question 3/15 Answer is mandatory

In Figure. 4. the power delivered / absorbed by the dependent source is equal to

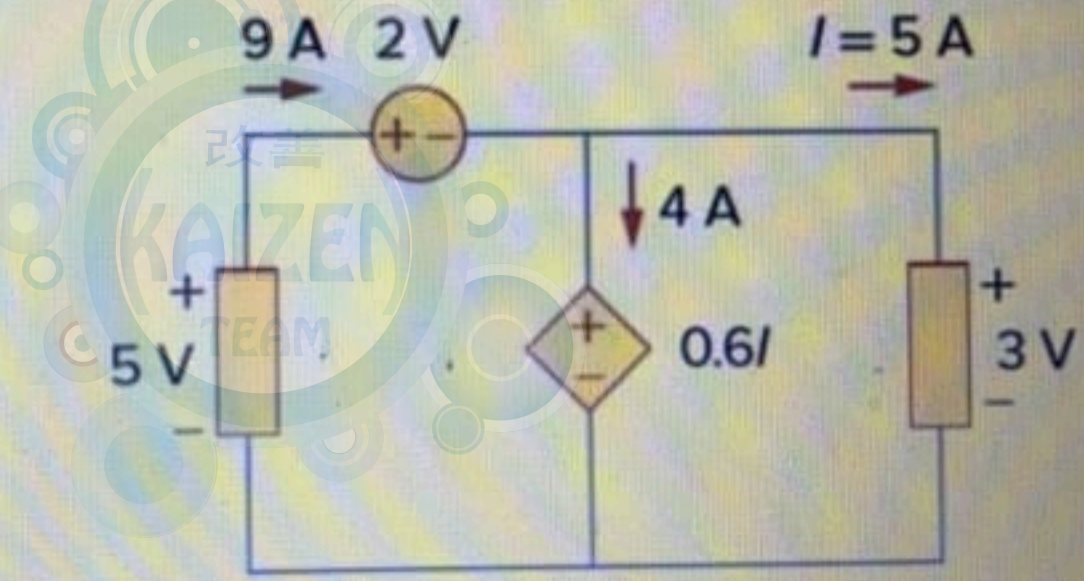
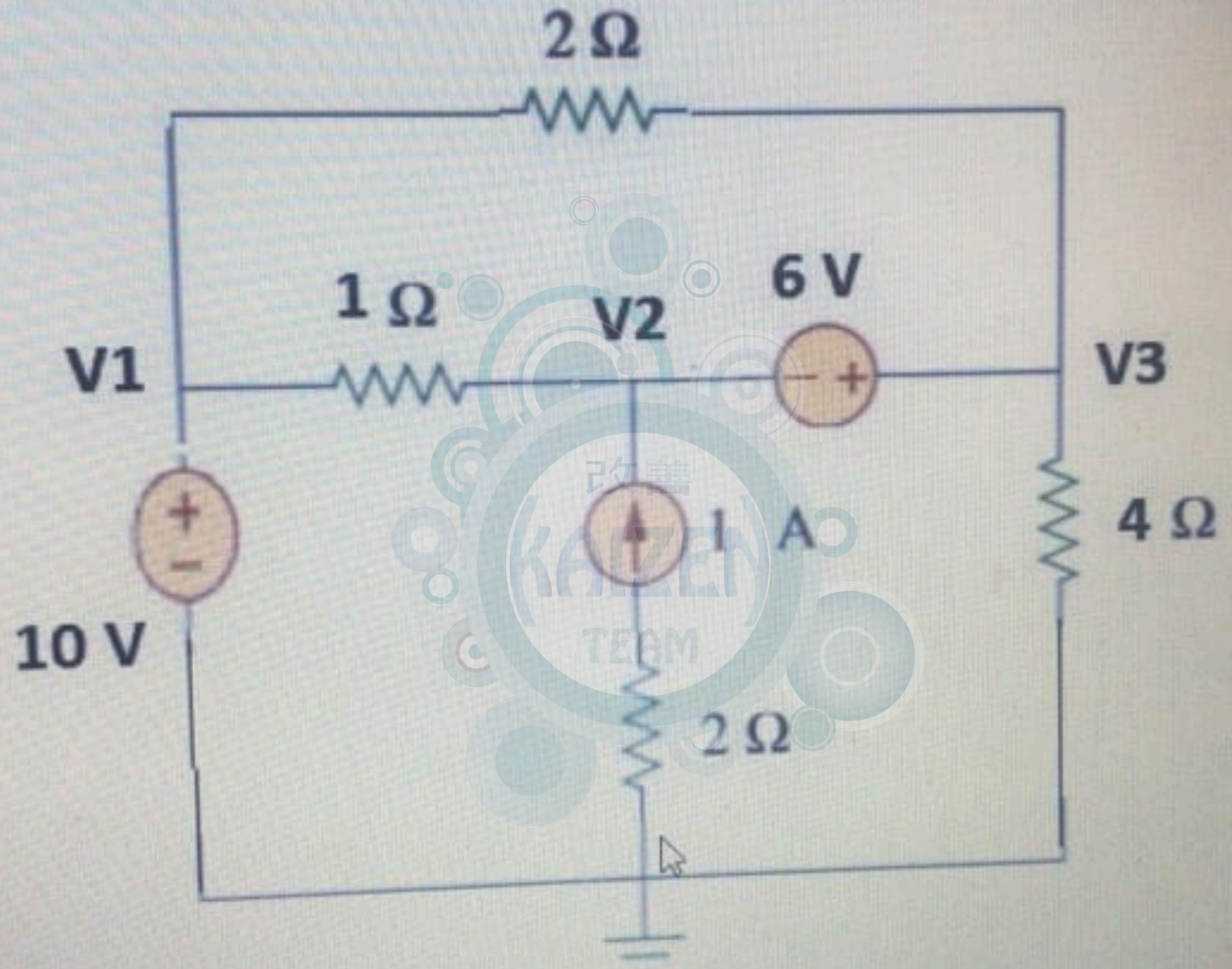


Figure 4:

Zoom image



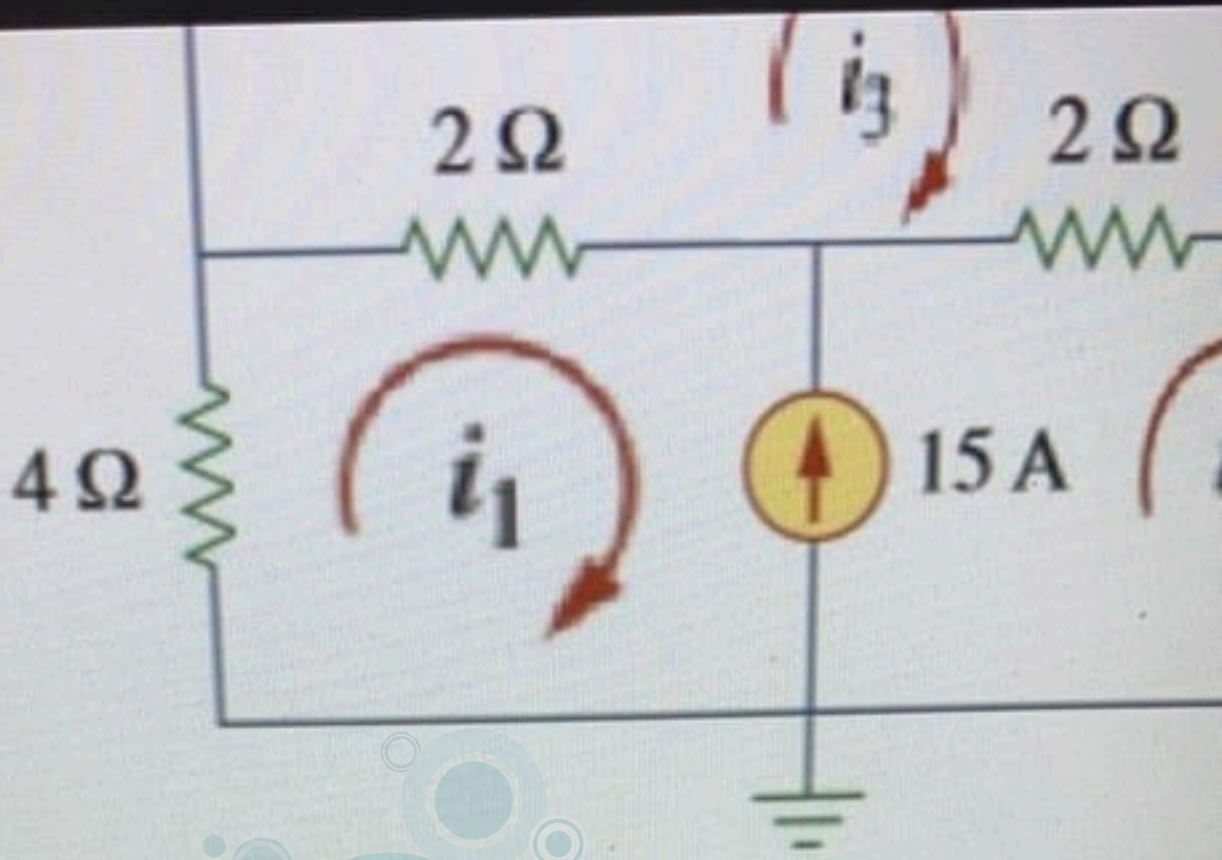
○ 6.57 V

In Figure. 4. the power delivered / absorbed by the dependent source is equal to

Figure 4:

Zoom image

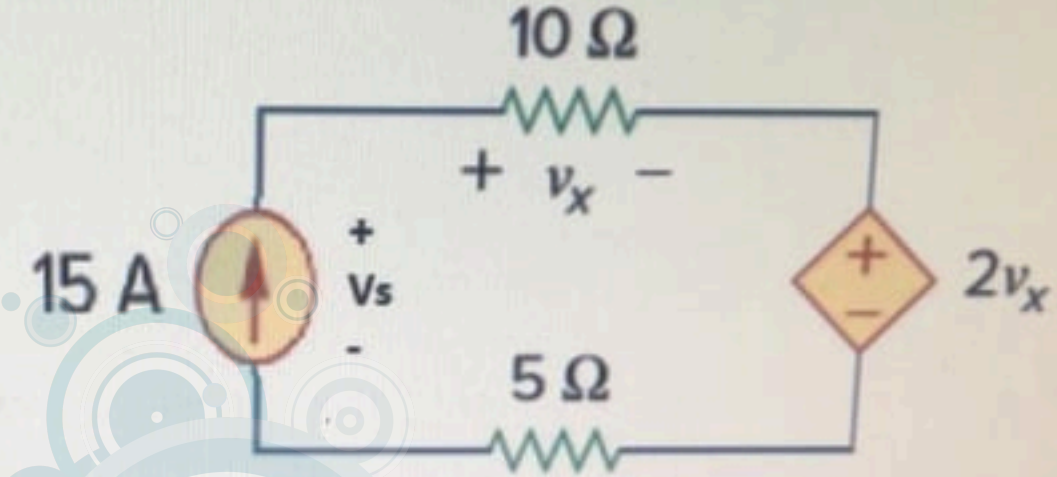
- 8 Watt absorbed
- 10 Watt absorbed
- 10 Watt delivered
- 12 Watt delivered
- 12 Watt absorbed



- 0 A
- - 15 A
- 15 A
- 7.5 A
- - 7.5 A

SUBMIT ANSWER

In the circuit shown, V_s equal to

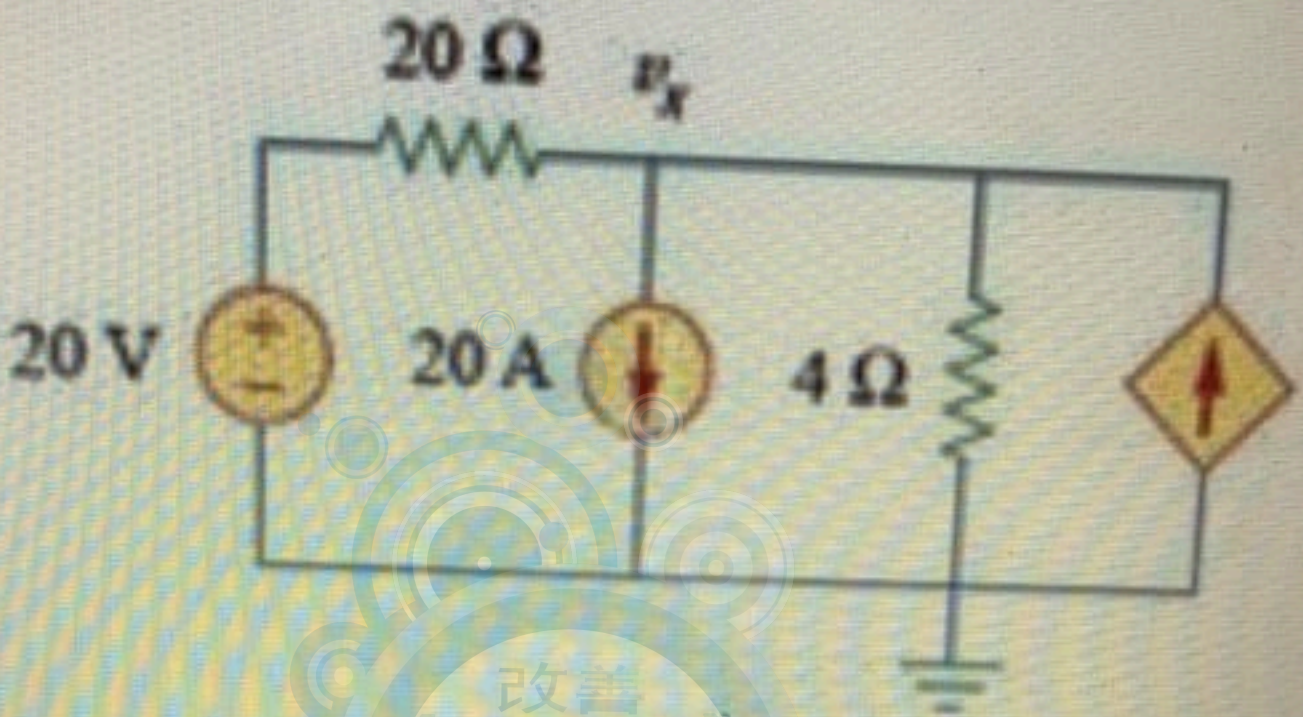


- 15 V
- 525 V
- 150 V
- - 525 V
- - 150 V

SUBMIT ANSWER

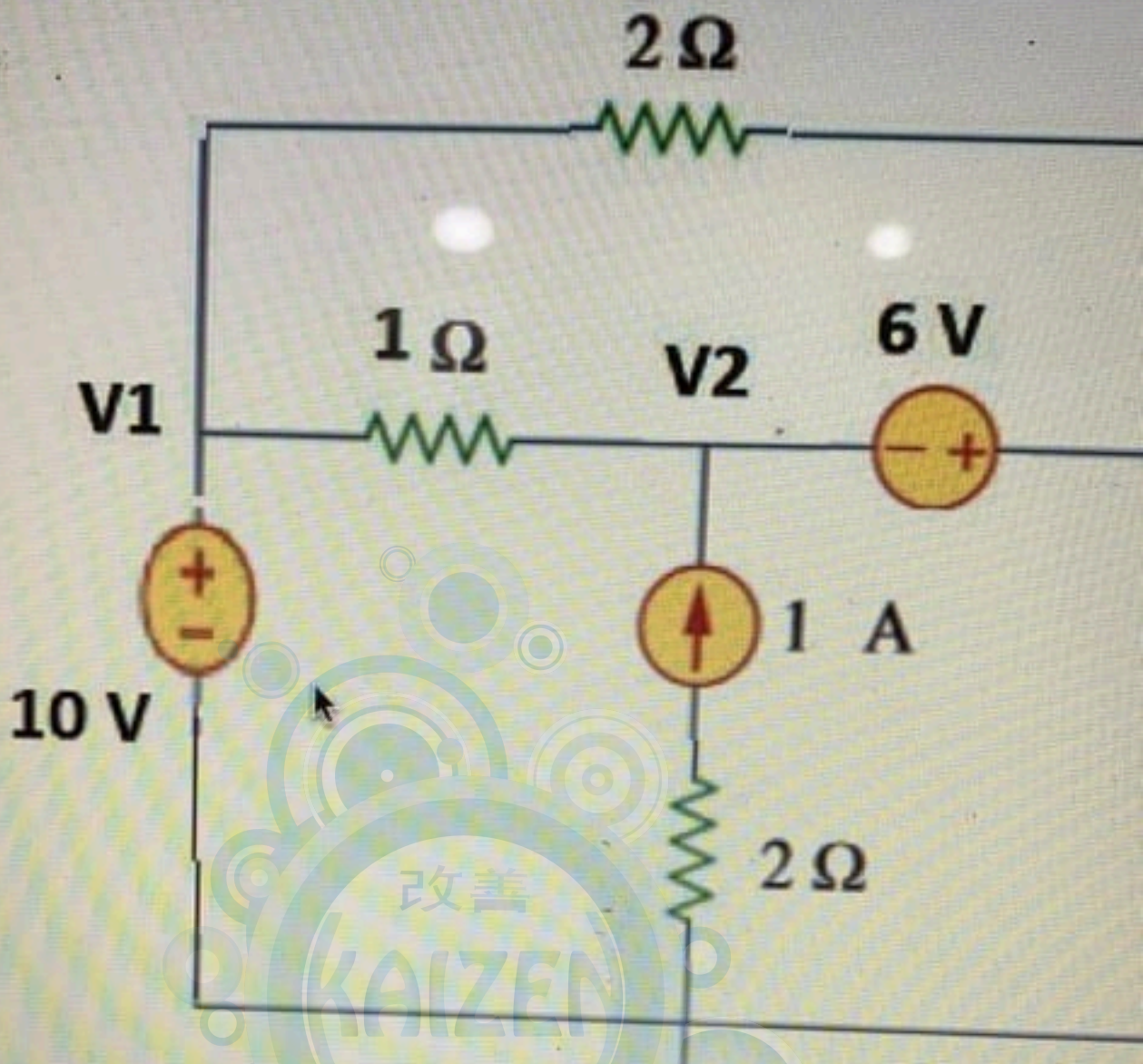
Question 10/15 Answer is mandatory

Using the superposition principle, the voltage V_x under the eff



- ○ - 100 V
- ○ 100 V
- ◉ 5 V
- ○ - 5V

The voltage of node 2 is equal to



- (●) 6.57 V
- ( ) - 6.57 V

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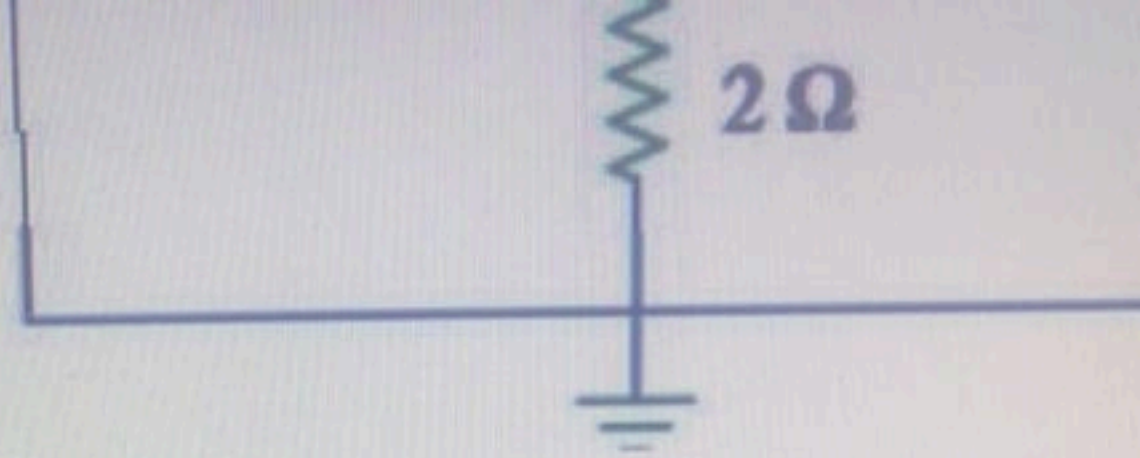
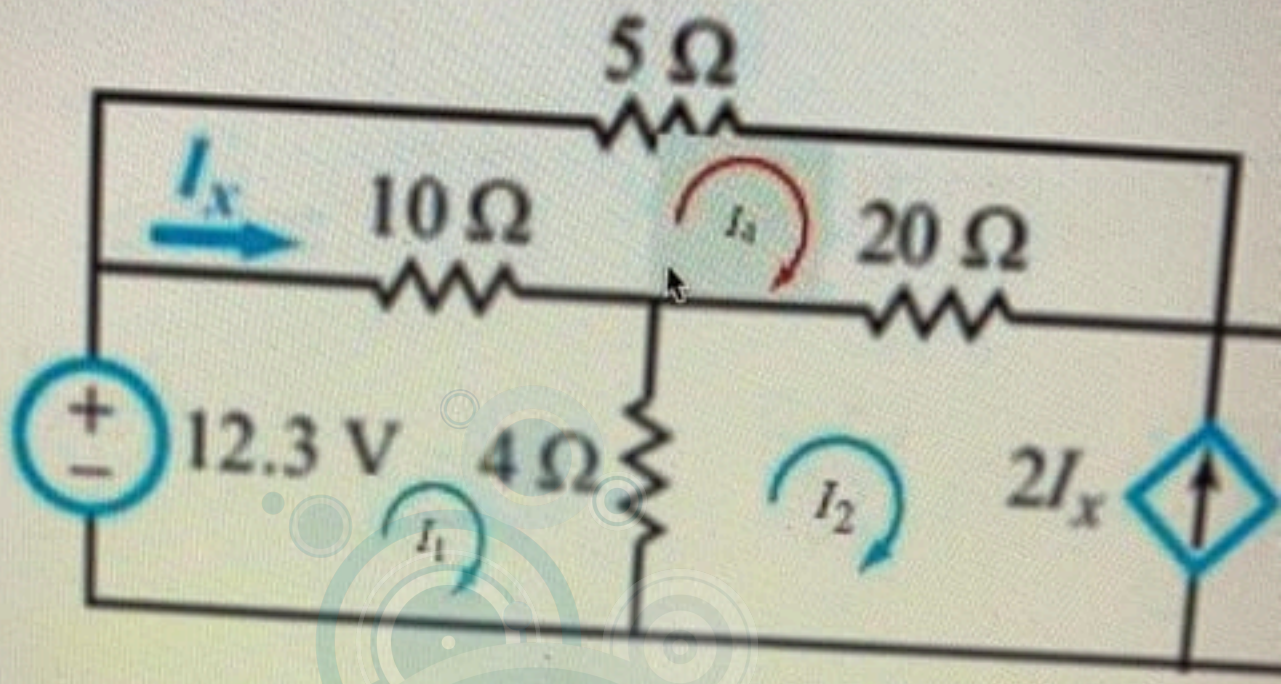


- (●) 6.57 V
- ( ) - 6.57 V
- ( ) 2.15 V
- ( ) -2.15 V
- ( ) 10 V

SUBMIT ANSWER

Question 13/15 Answer is mandatory

The KCL equation obtained from the supermesh in the circuit shown is:



- ○ $I_2 - 3I_4 = 0$
- ○ $2I_1 - I_2 + 2I_4 = 0$
- ◉ $2I_1 + I_2 - I_3 - 2I_4 = 0$

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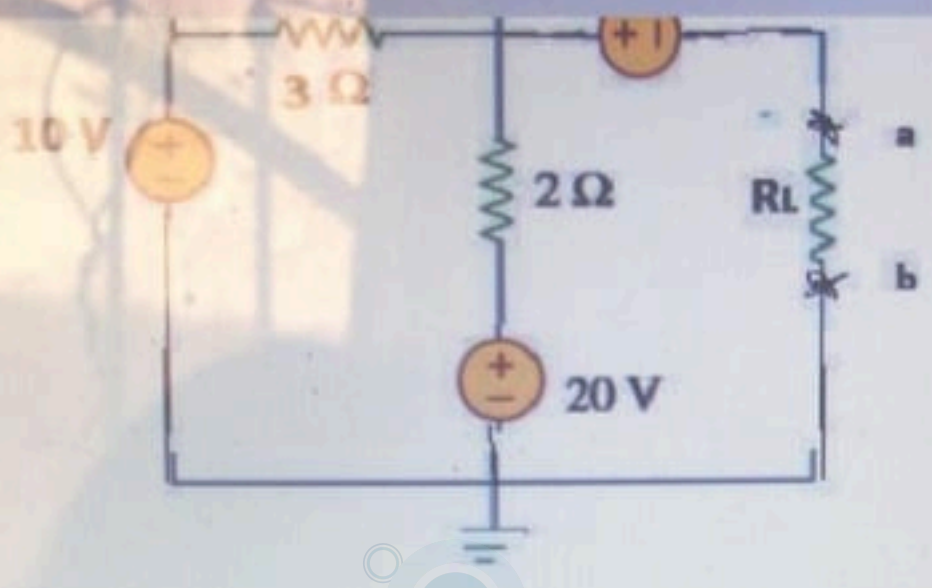
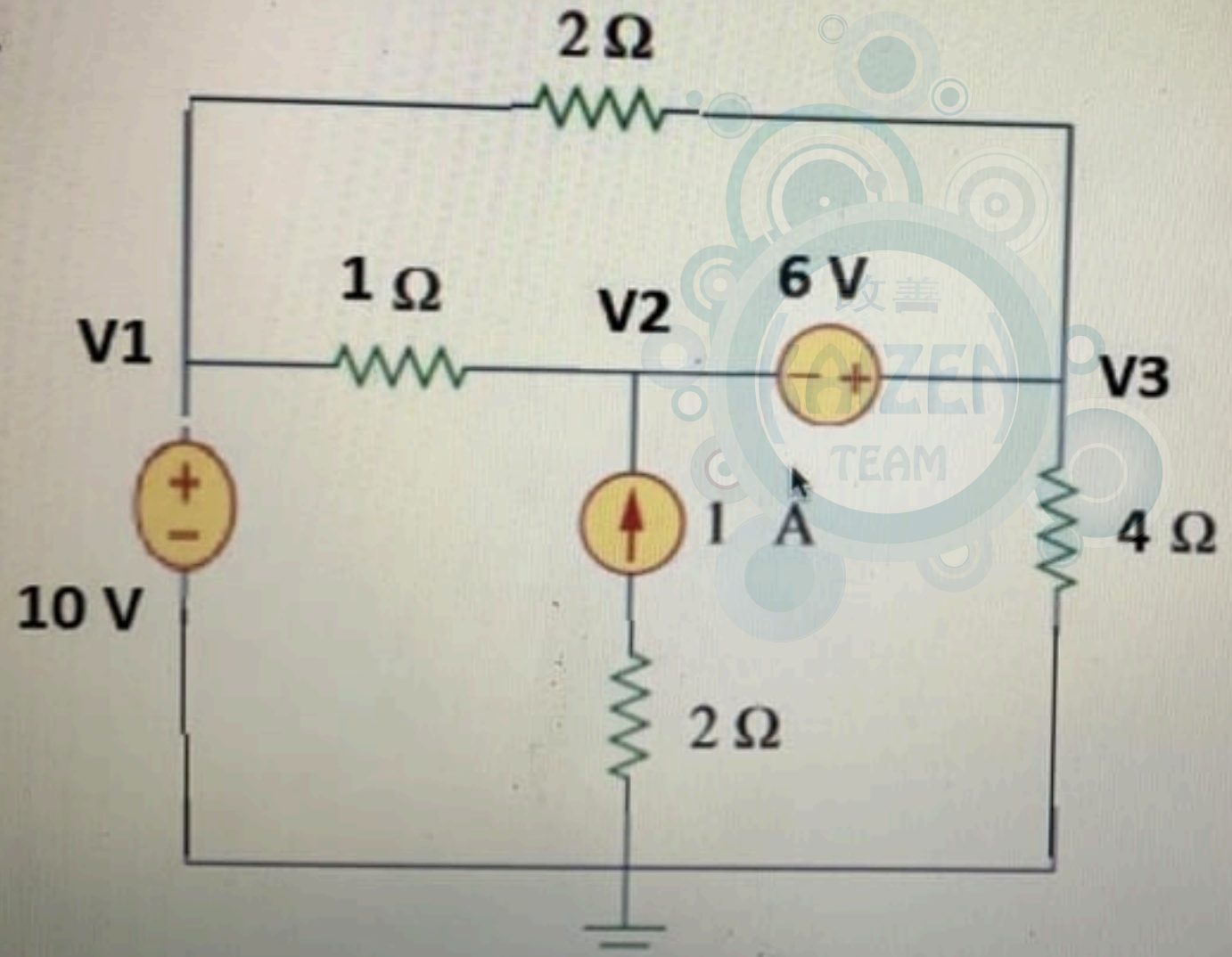


- -8 V
- 8 V
- 52 V
- -52 V
- 20

SUBMIT ANSWER

Question 8/15 Answer is mandatory

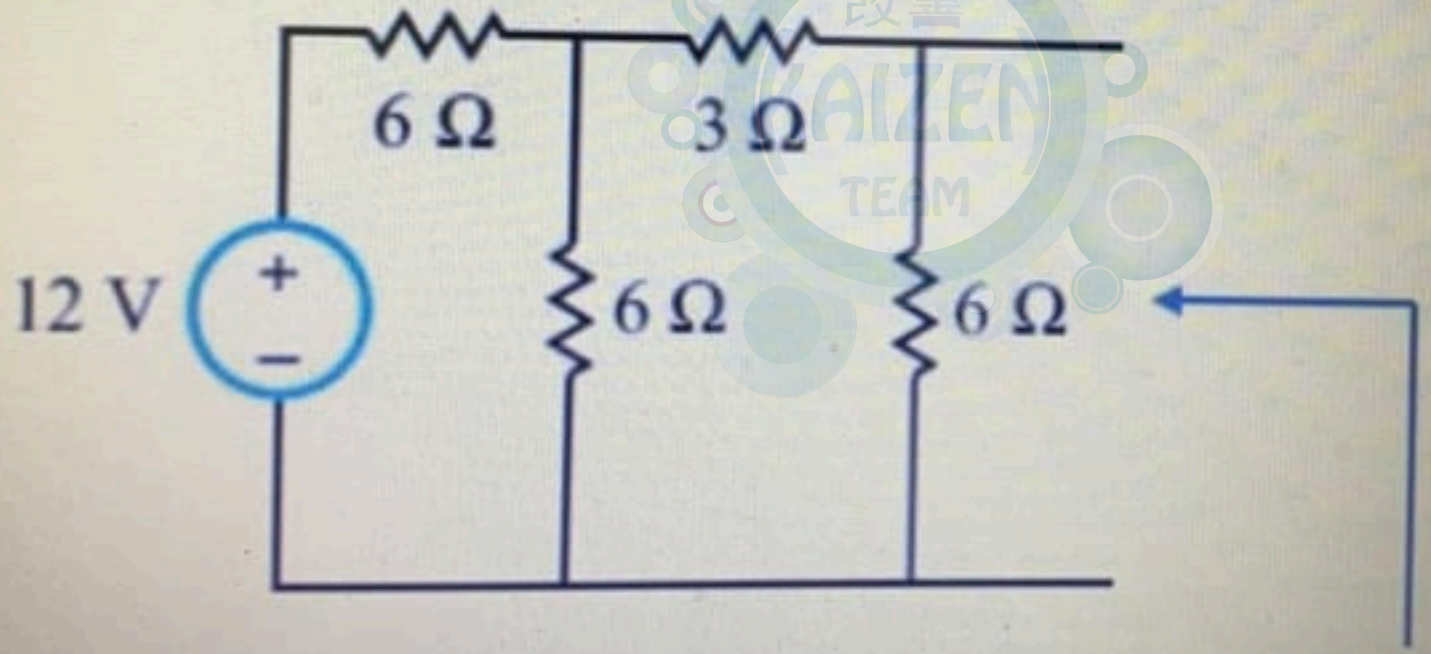
The voltage of node 2 is equal to



Question 14/15 Answer is mandatory

Using the principle of source transformation, the circuit shown can be simplified into a single voltage source V_z in

series with a single resistor R. **Find V_z**

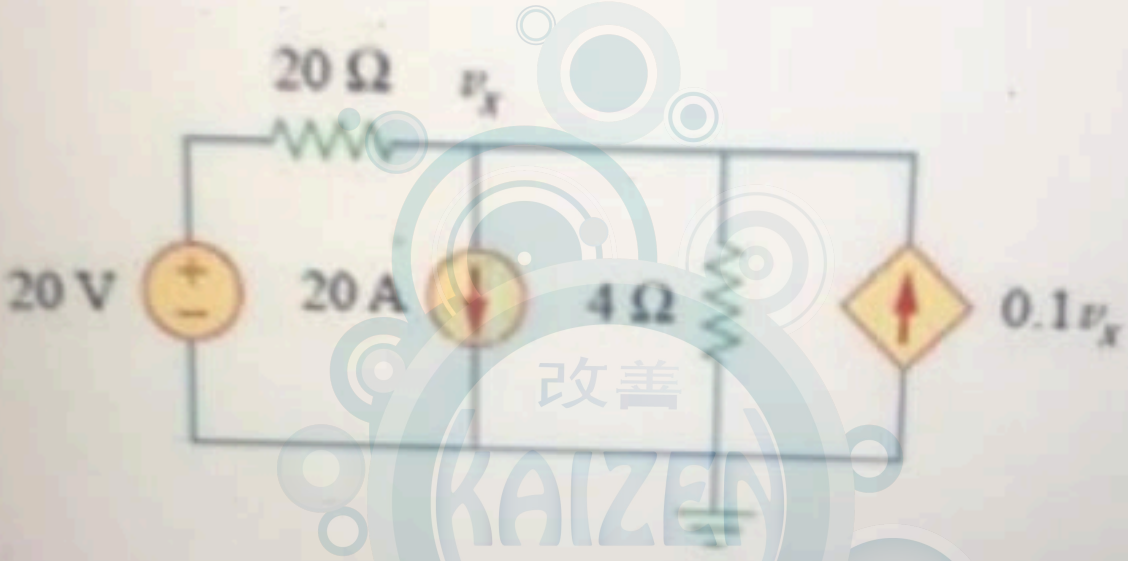


Test: EE203 Midterm Exam 2ndSemester 2020/2021 (1)

ne left to complete the test: 0 h 30 min. 53 sec.

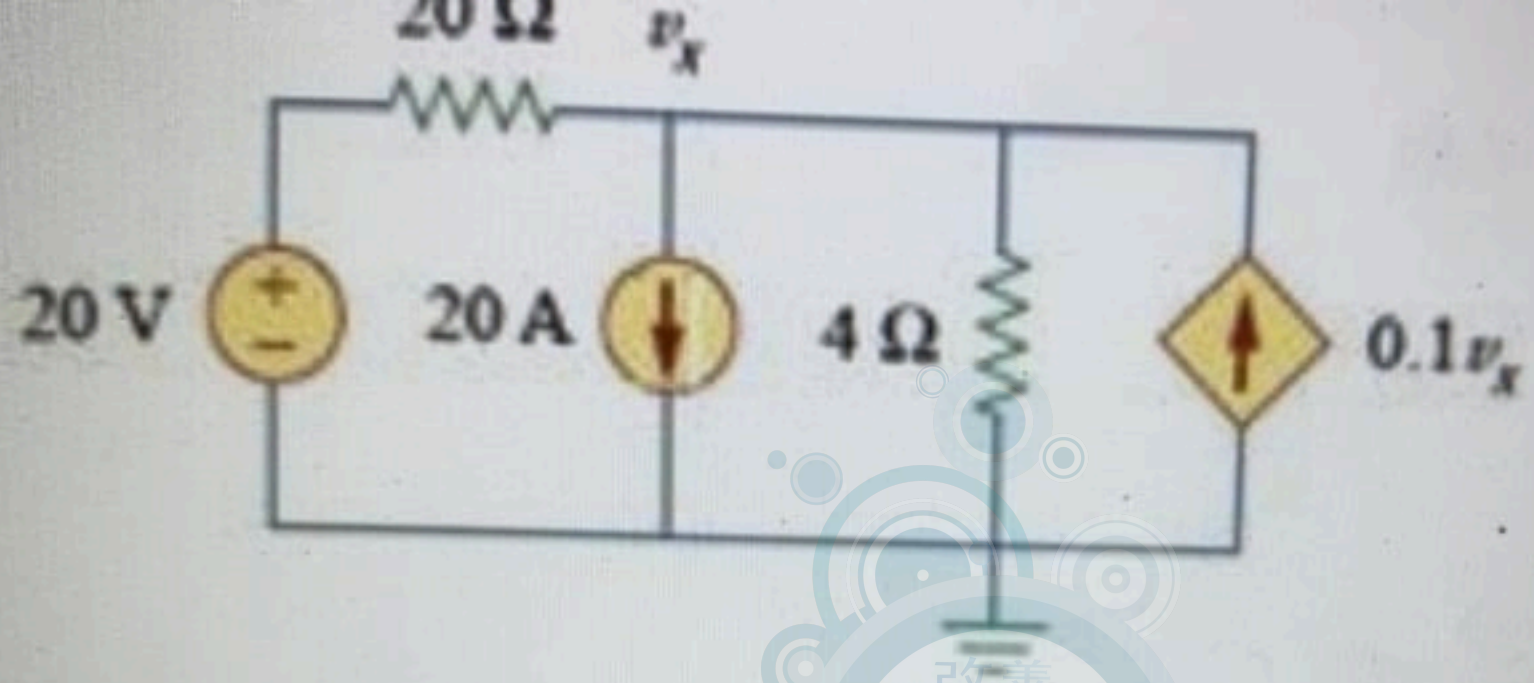
Question 10/15 Answer is mandatory

Using the superposition principle, the voltage V_x under the effect of the 20V voltage source acting alone is:



- ○ - 100 V
- ○ 100 V
- ◉ 5 V
- ○ - 5V
- ○ - 95 V

SUBMIT ANSWER



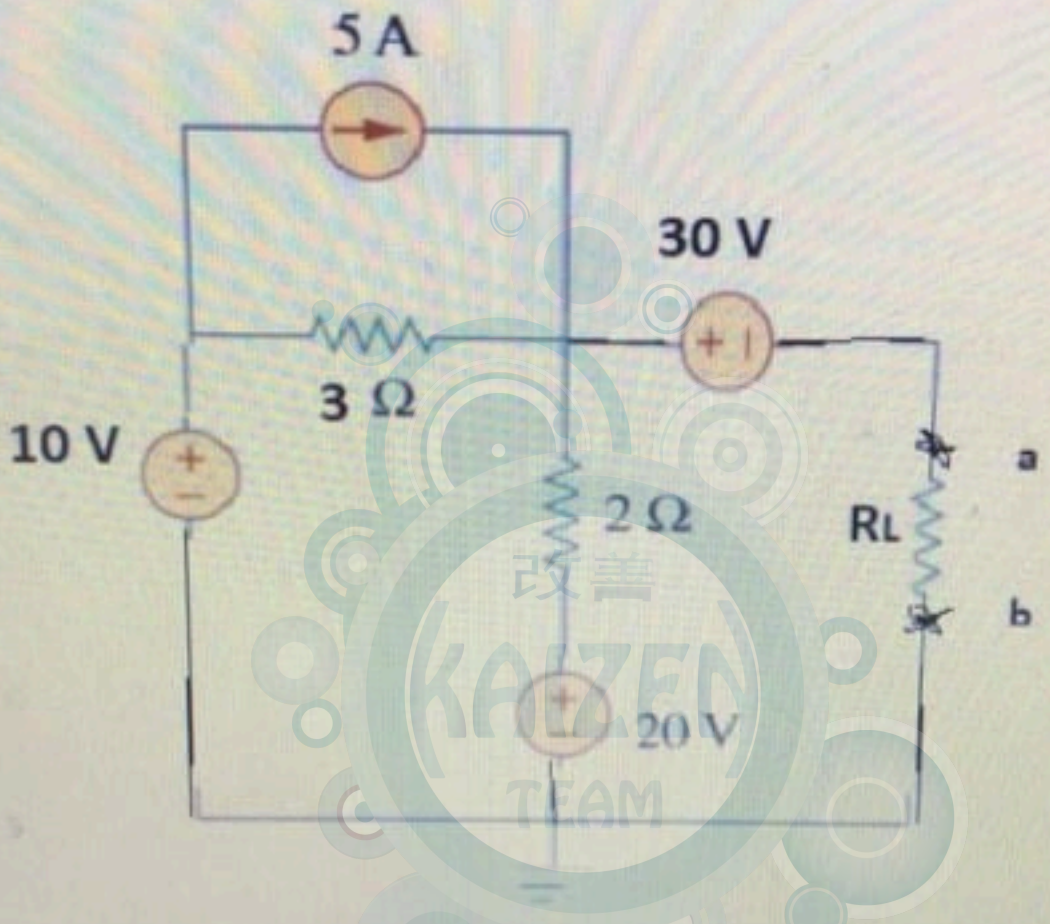
- 100 V

100 V

5 V

- 5V

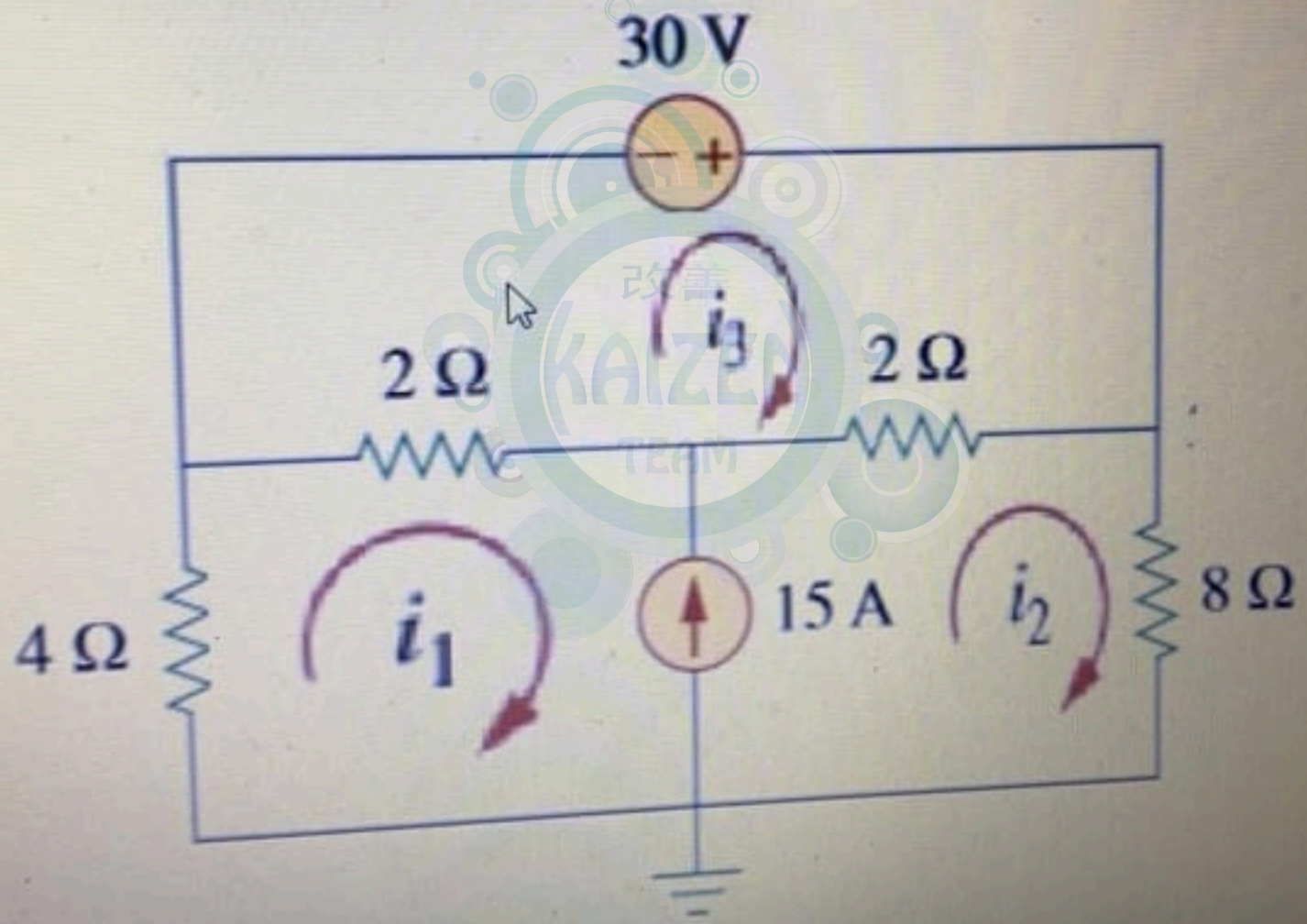
V_{th} as seen between a and b is equal to:



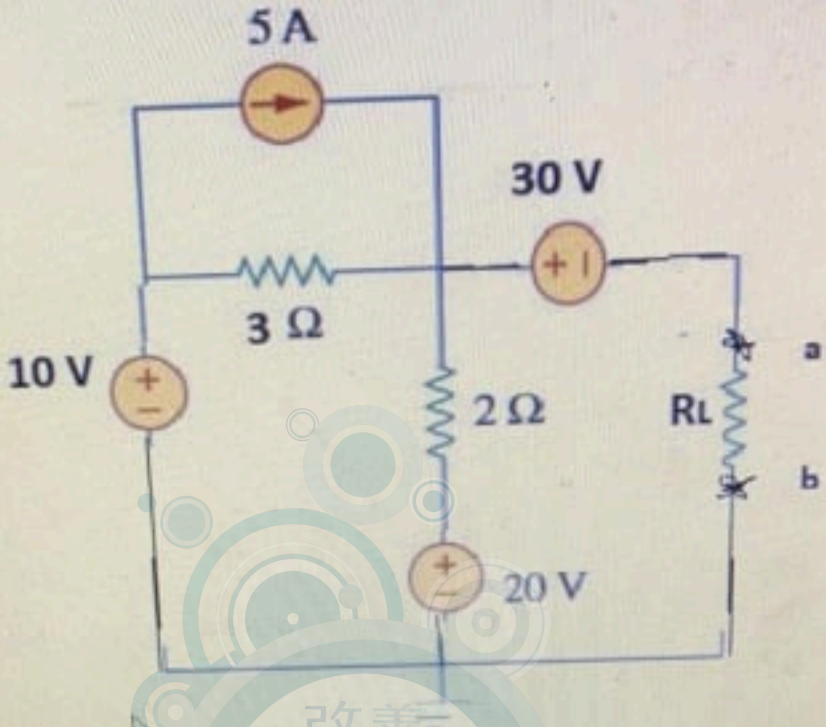
- -8 V
- 8 V

Question 7/15 Answer is mandatory

Using mesh analysis, find the current i_1



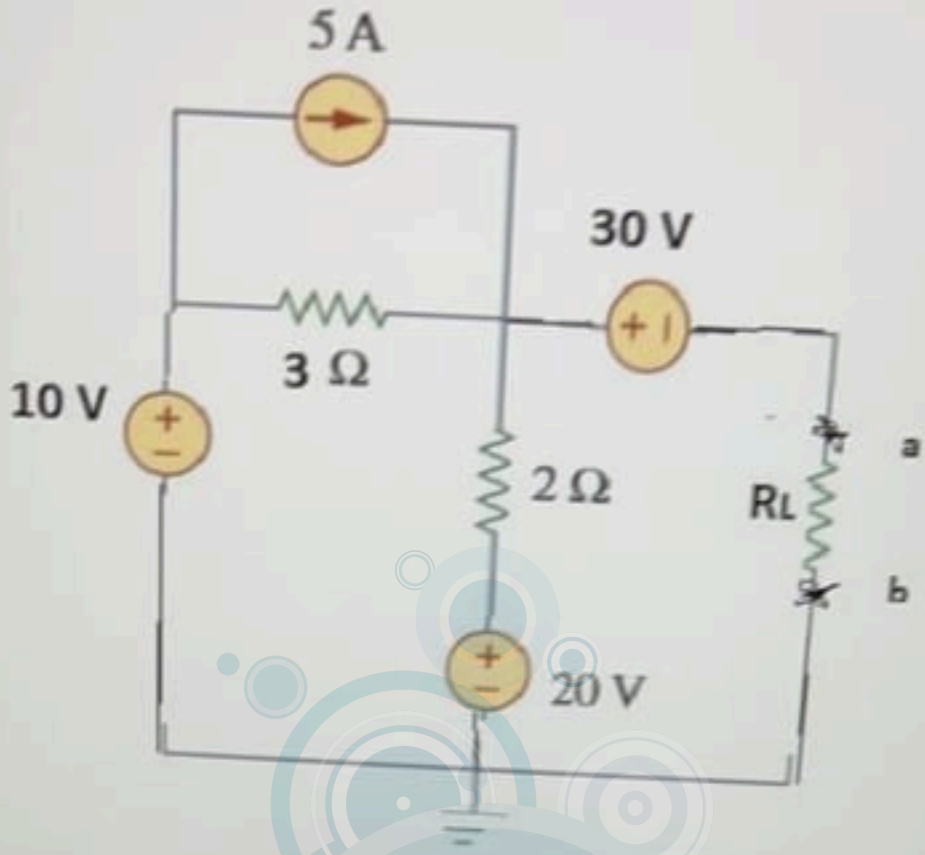
R_{th} seen between a and b is equal to:



2.2

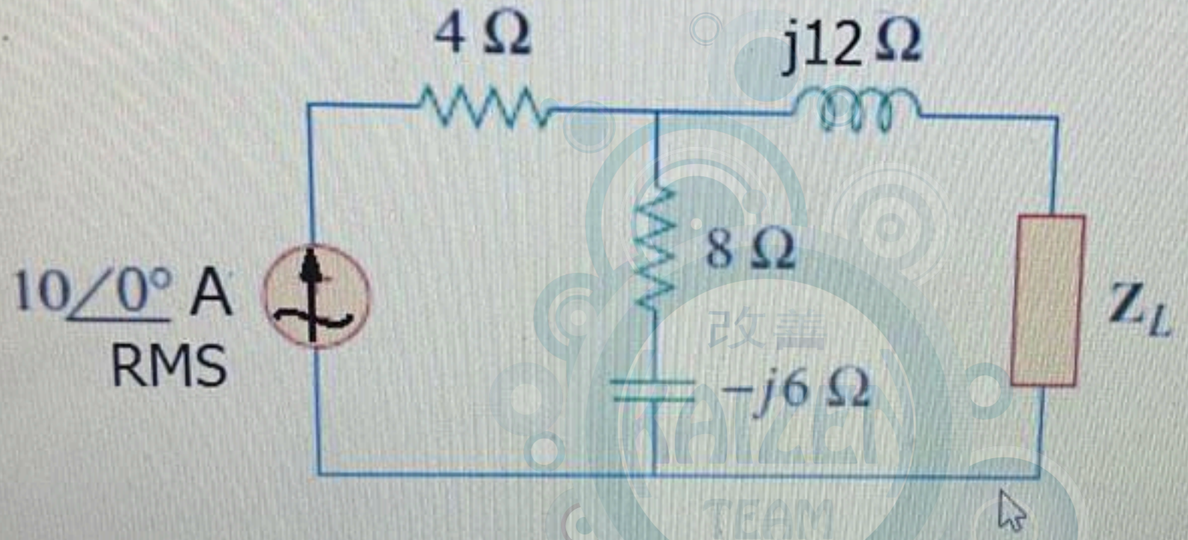
6

R_{th} seen between *a* and *b* is equal to:



○ 2.2

The load impedance that maximizes the average power drawn from the circuit, and the maximum average power of Figure shown wqual to ....., ...



- 2.93 - j 11.47 Ω

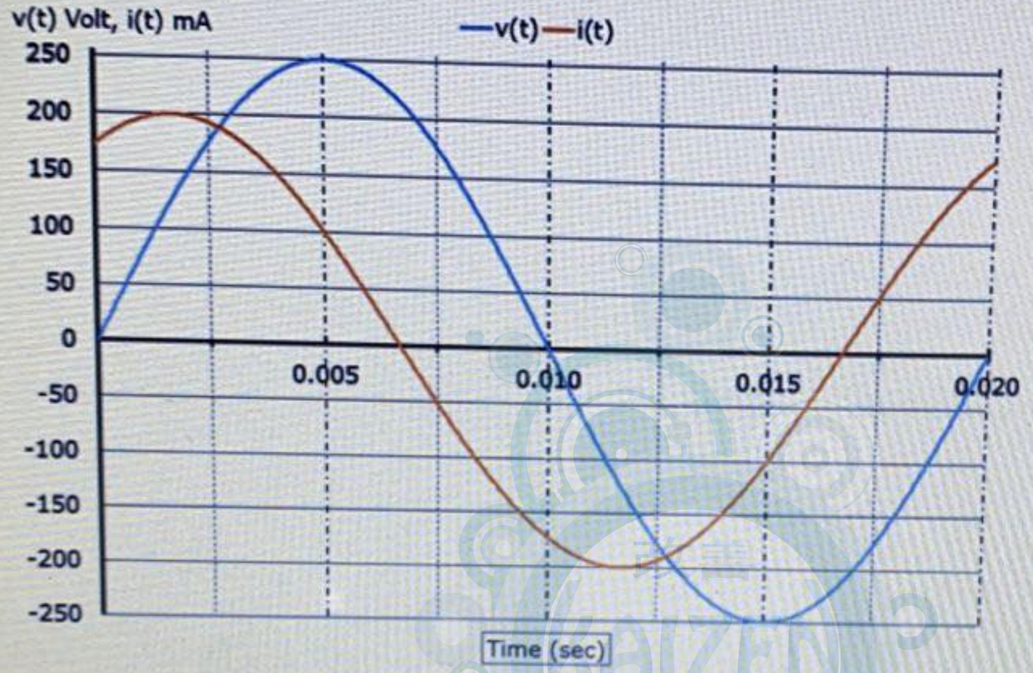
  853.24 W

- $10\angle 36.87°$ Ω,

  215.3 W

- None of these

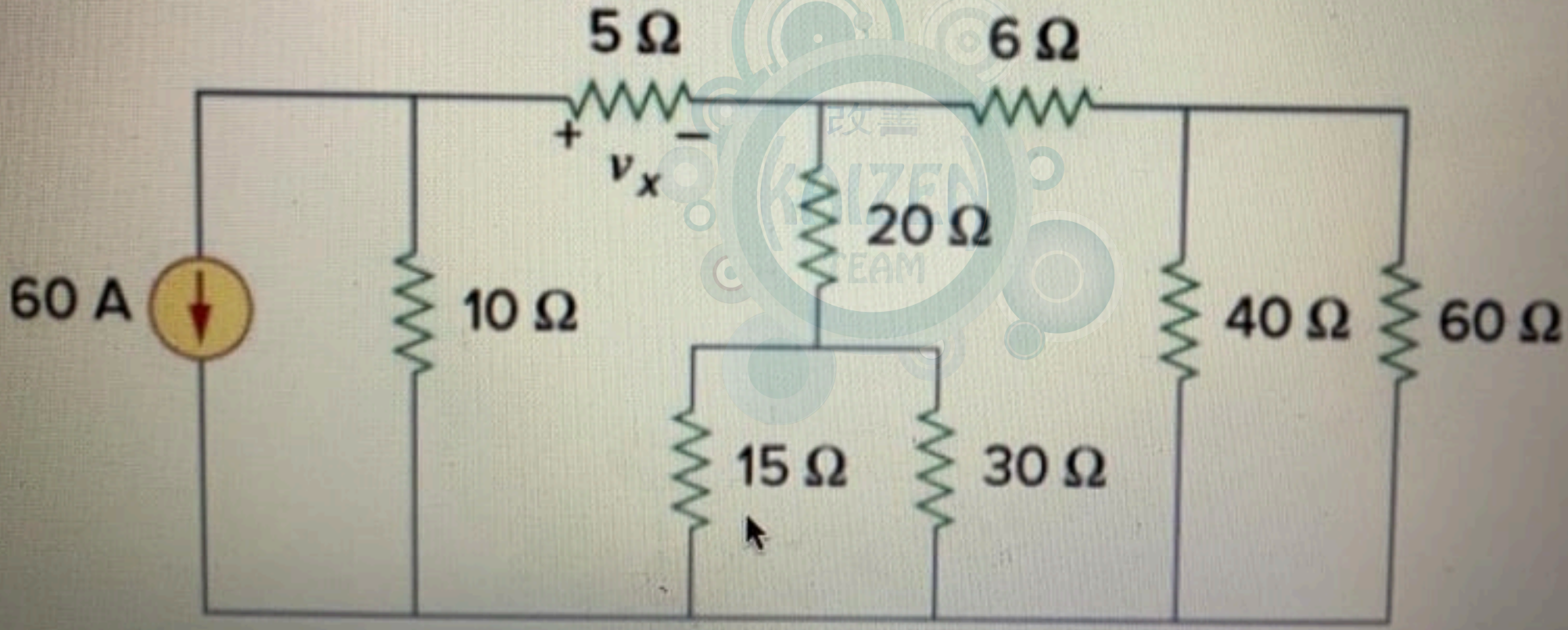
The figure shows v(t) and i(t) across a load. Then, phase shift angle in degrees is:



- [ ] -90
- [ ] -60
- [ ] 90
- [ ] -30
- [ ] -45
- [ ] 45

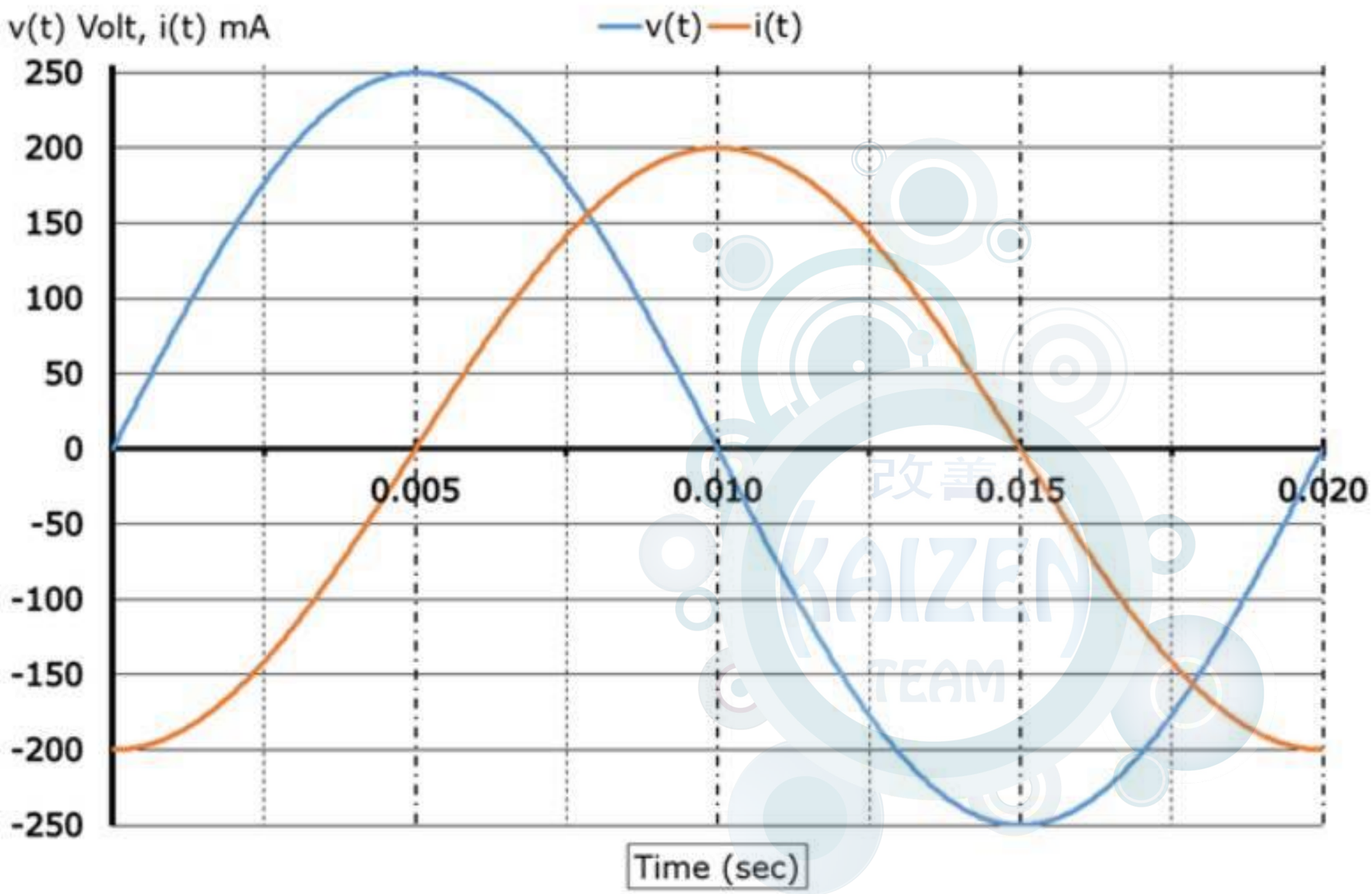
Question 6/15 Answer is mandatory

In the circuit shown find V_x



Question 3/5 Answer is mandatory

The figure shows v(t) and i(t) across a load. Then, phase shift angle in degrees is:



- [ ] 30
- [ ] -90
- [ ] -30

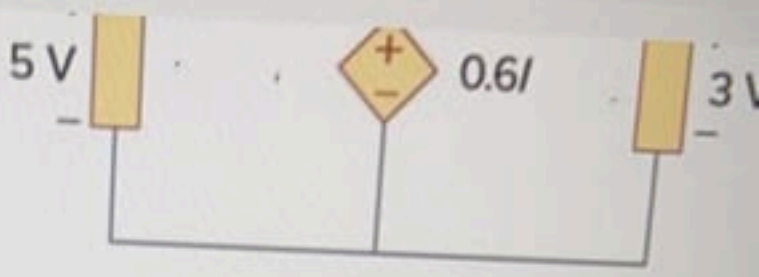


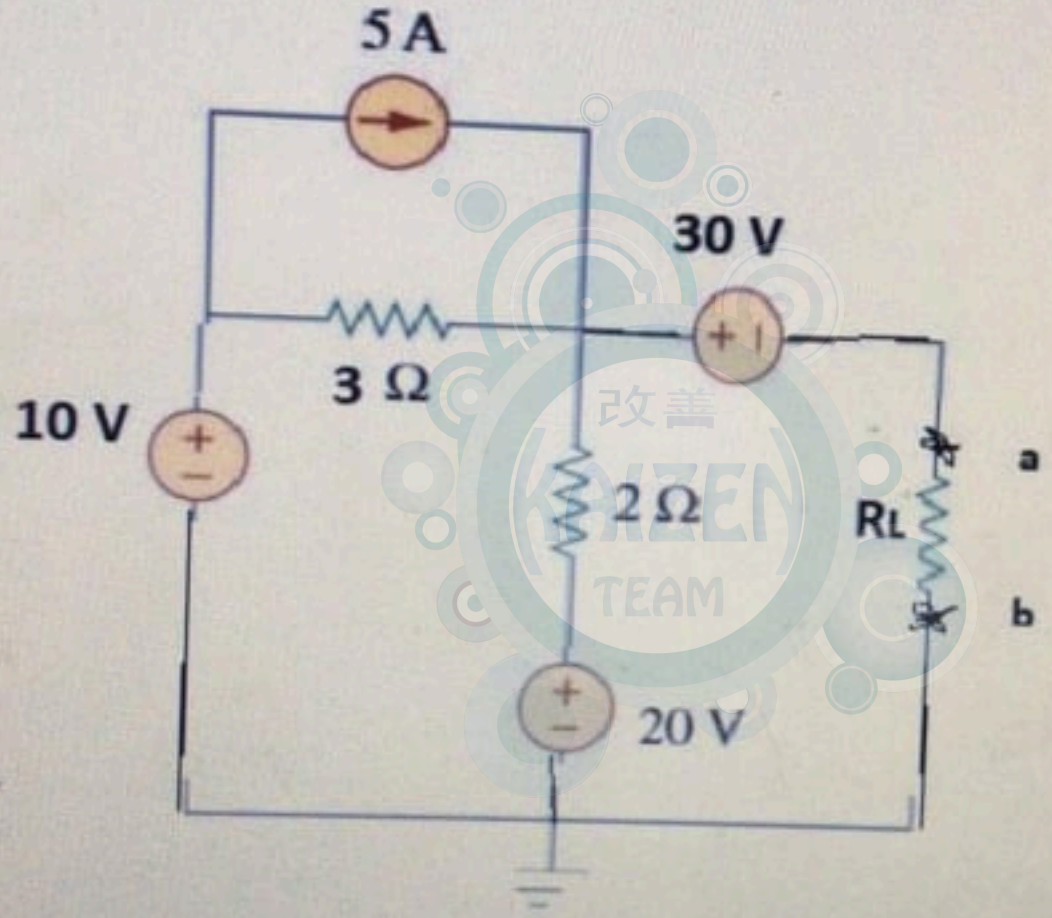
Figure 4:

Zoom image

- 8 Watt absorbed
- 10 Watt absorbed
- 10 Watt delivered
- 12 Watt delivered
- 12 Watt absorbed

SUBMIT ANSWER

R_{th} seen between *a* and *b* is equal to:



○ 2.2

Question 3/15 Answer is mandatory

In Figure. 4. the power delivered / absorbed by the dependent source is equal to

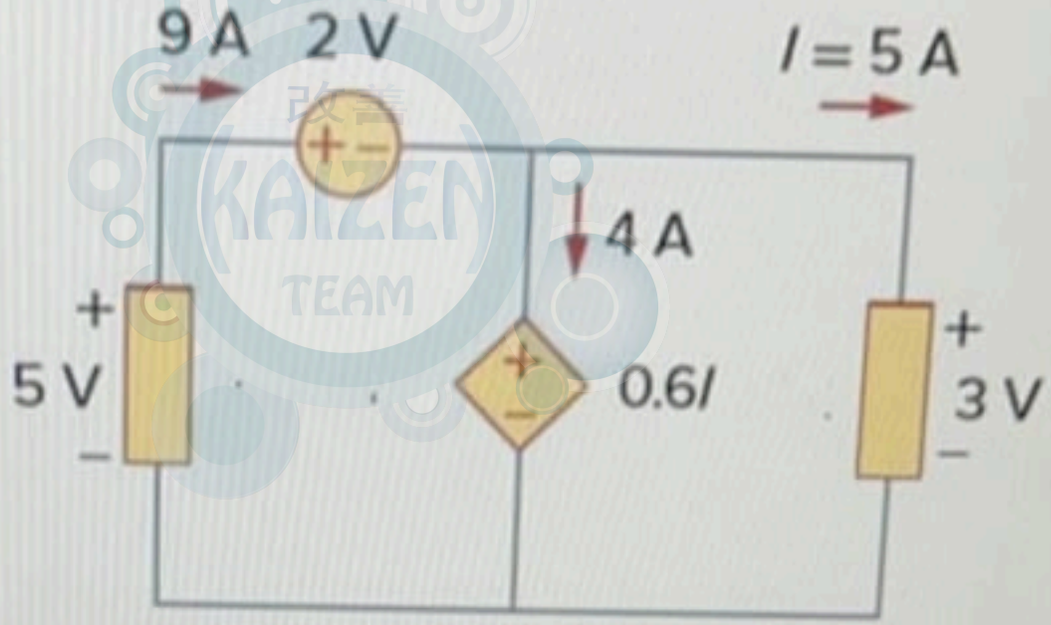
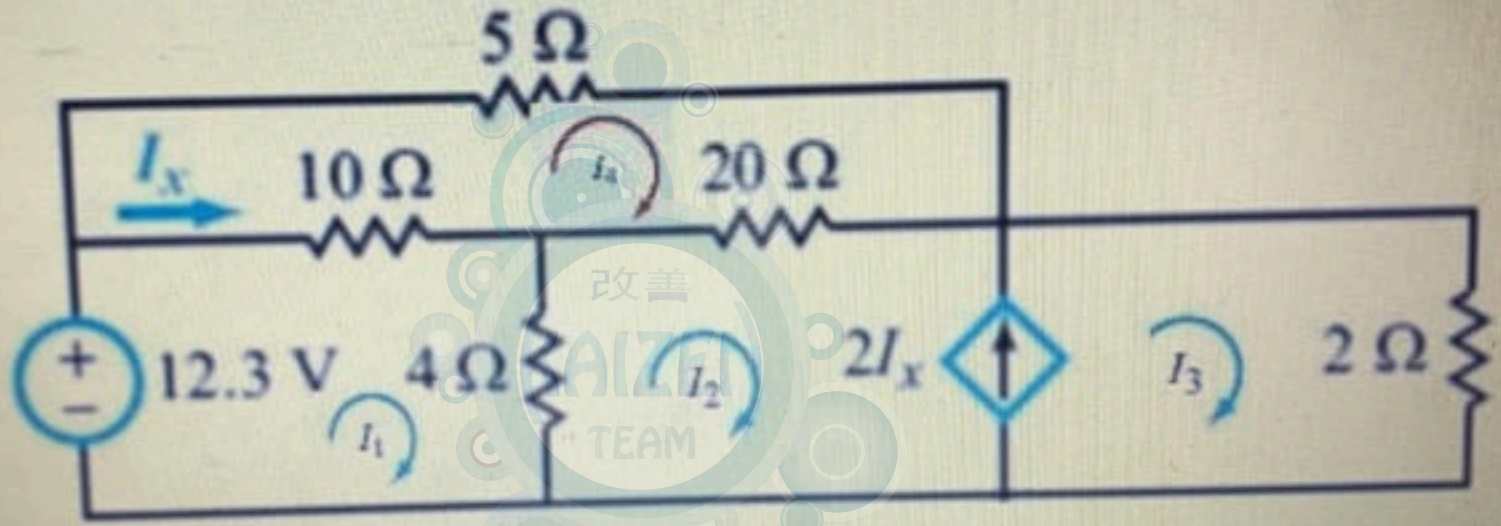


Figure 4:

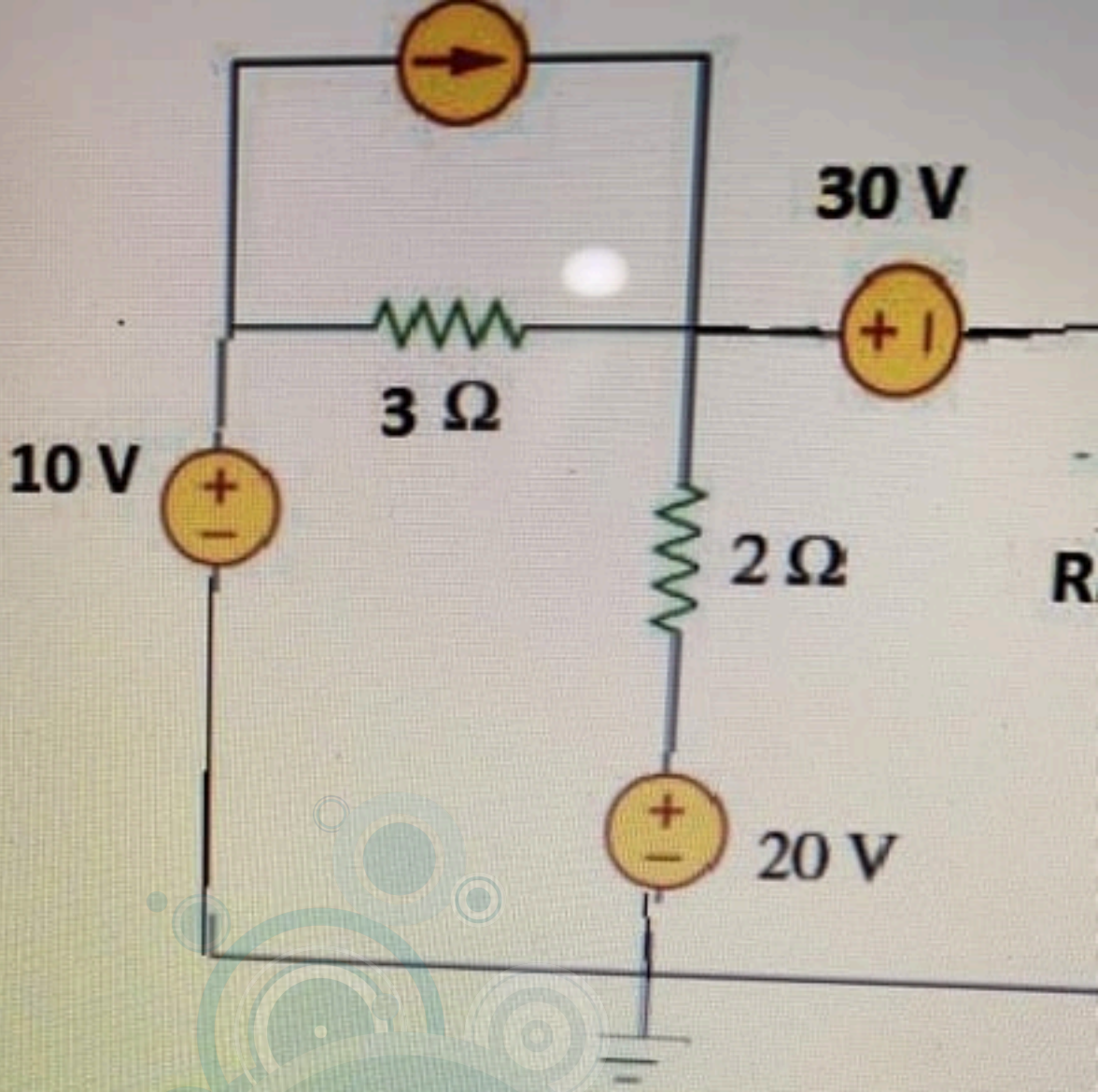
Zoom image

Question 13/15 Answer is mandatory

The KCL equation obtained from the supermesh in the circuit shown is:



- $I_2 - 3I_4 = 0$
- $2I_1 - I_2 + 2I_4 = 0$

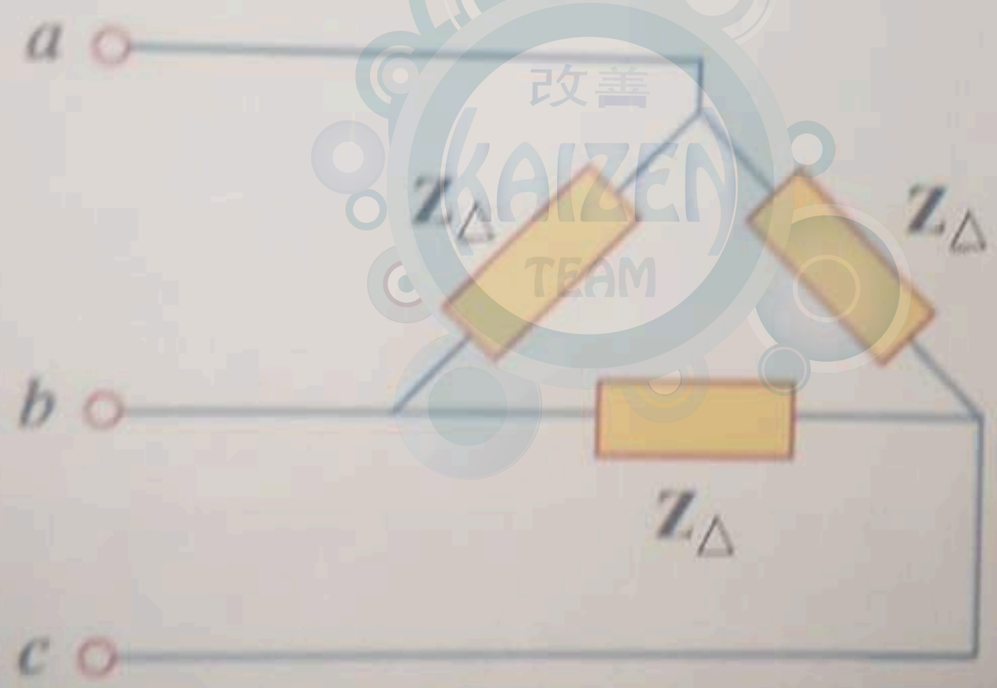


- -8 V
- 8 V
- 52 V
- -52 V
- 20

A three phase balanced voltages supply a Δ-connected balanced load.

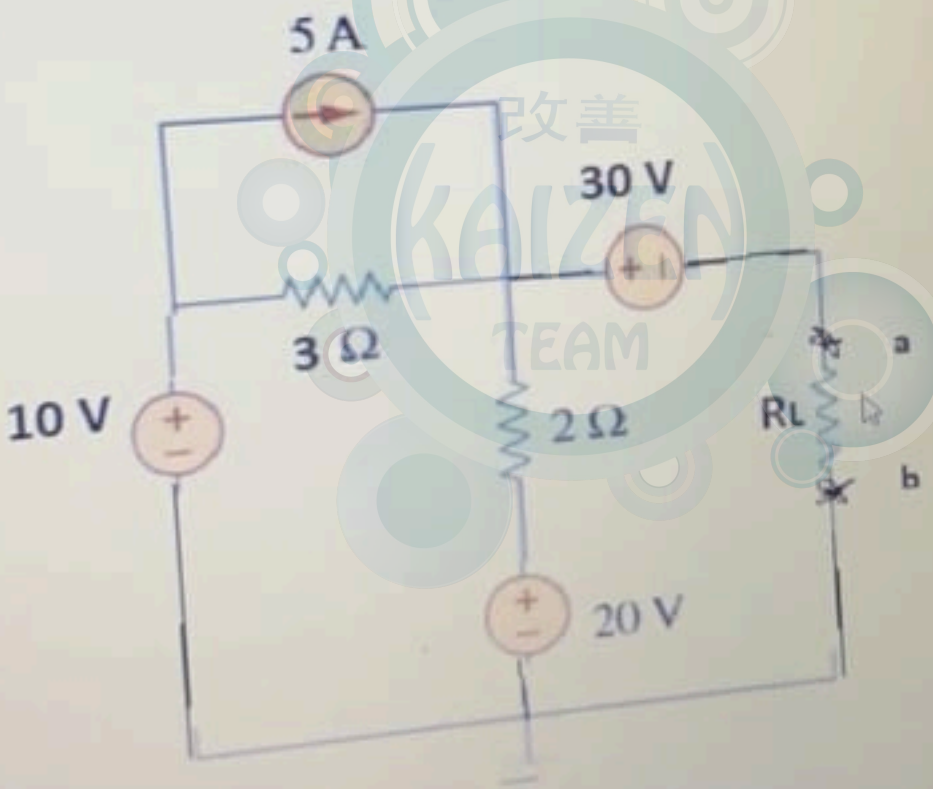
Given $V_{bc} = 416\angle 0^{\circ} V(rms)$, $Z_{\Delta} = 7.2\angle 0^{\circ}\ \Omega$.

Assuming positive sequence (abc).



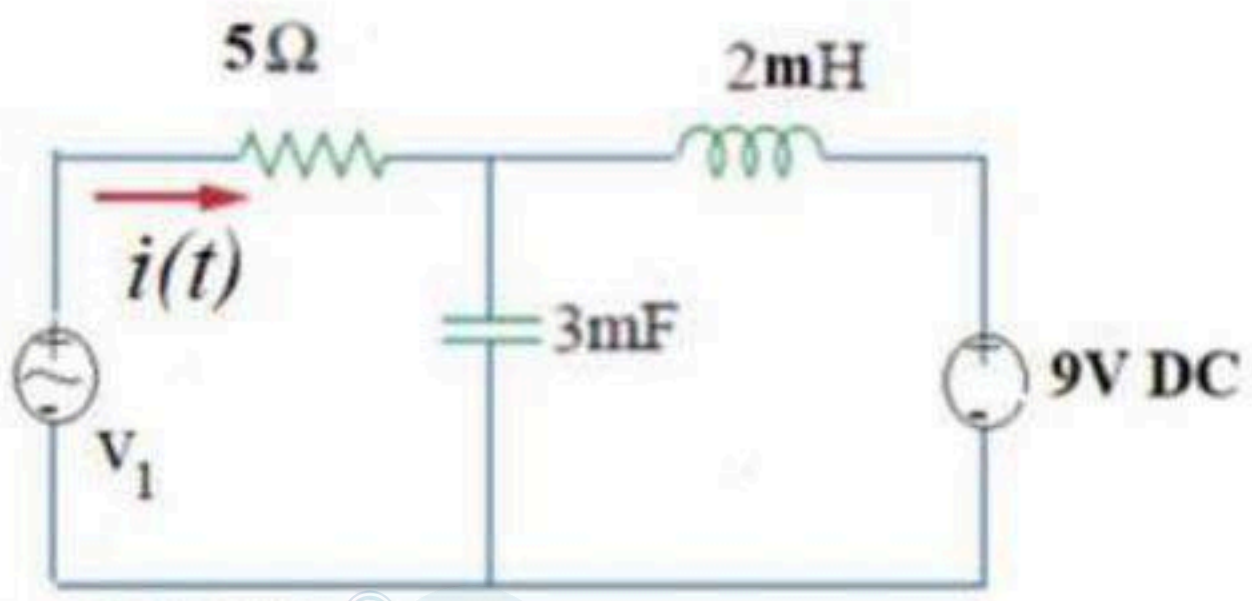
Question 2/15 Answer is mandatory

V_{th} as seen between a and b is equal to:



- -8 V
- 8 V
- 52 V

In the circuit shown, the current i(t) du to both voltage source is



$v_1(t)=10\cos(1000t)$ V

○ $i(t) = 1.994\cos(1000t - 4.5^\circ) - 1.8$ A

○ $i(t) = 1.8 + 1.857\cos(1000t - 21.8^\circ)$

○ None of these

○ $i(t) = 3.590\cos(1000t - 11.1^\circ)$

Question 5/15 Answer is mandatory

The equivalent resistance at the terminals a-b for the circuits shown in Figure. 7. is equal to

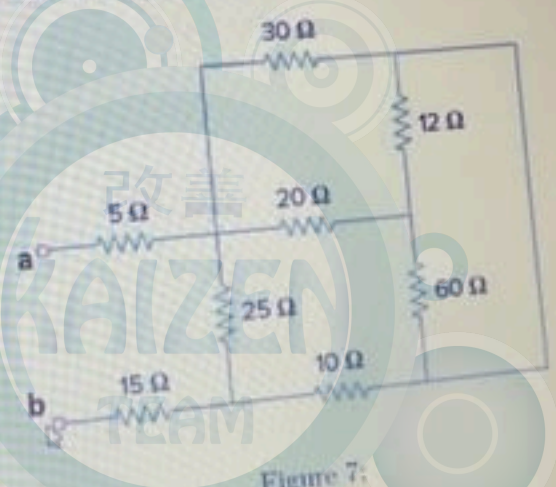


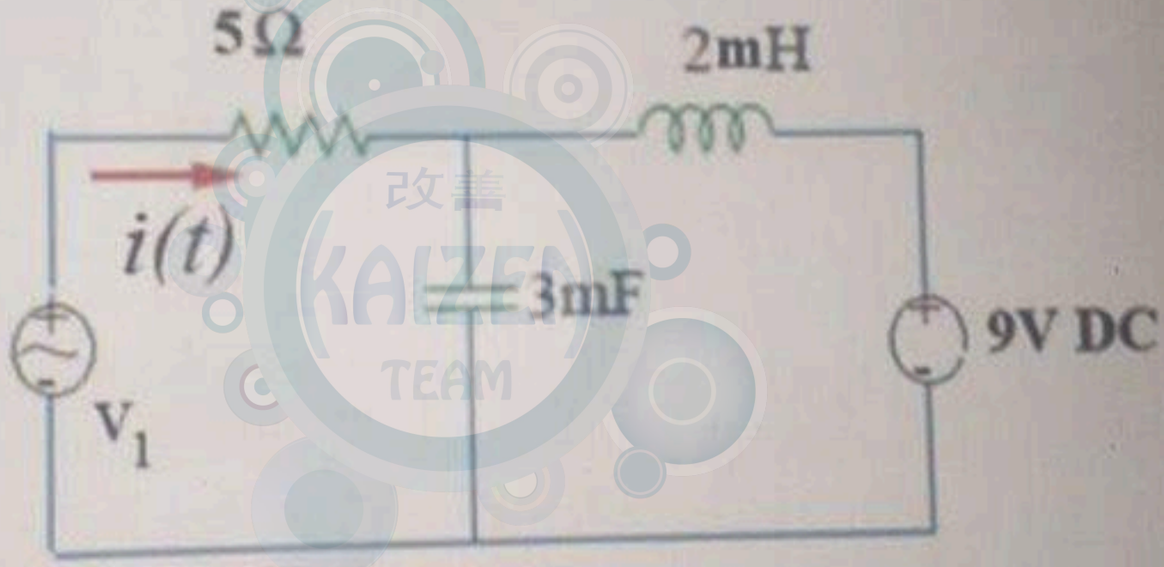
Figure 7:

Zoom image

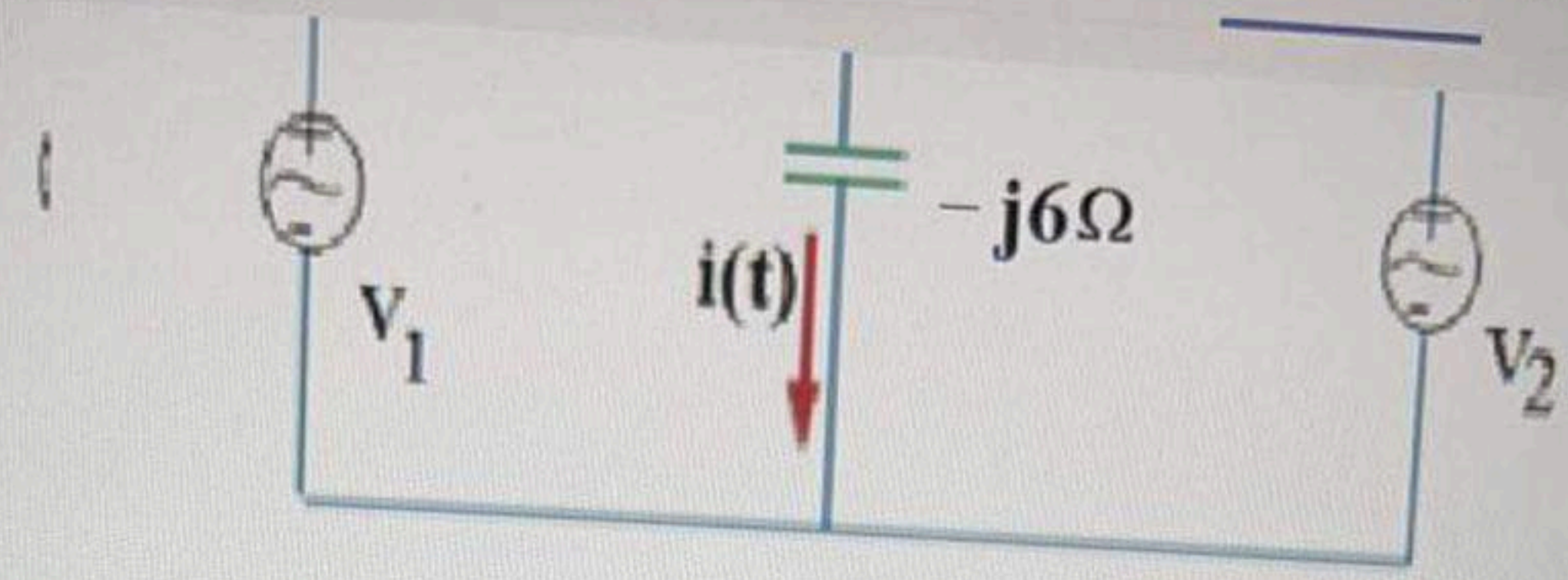
- 22.5 Ω
- 32.5 Ω
- 15 Ω
- 41.45 Ω

Question 1/6 (3 p.)

In the circuit shown, the current i(t) du to both voltage source is



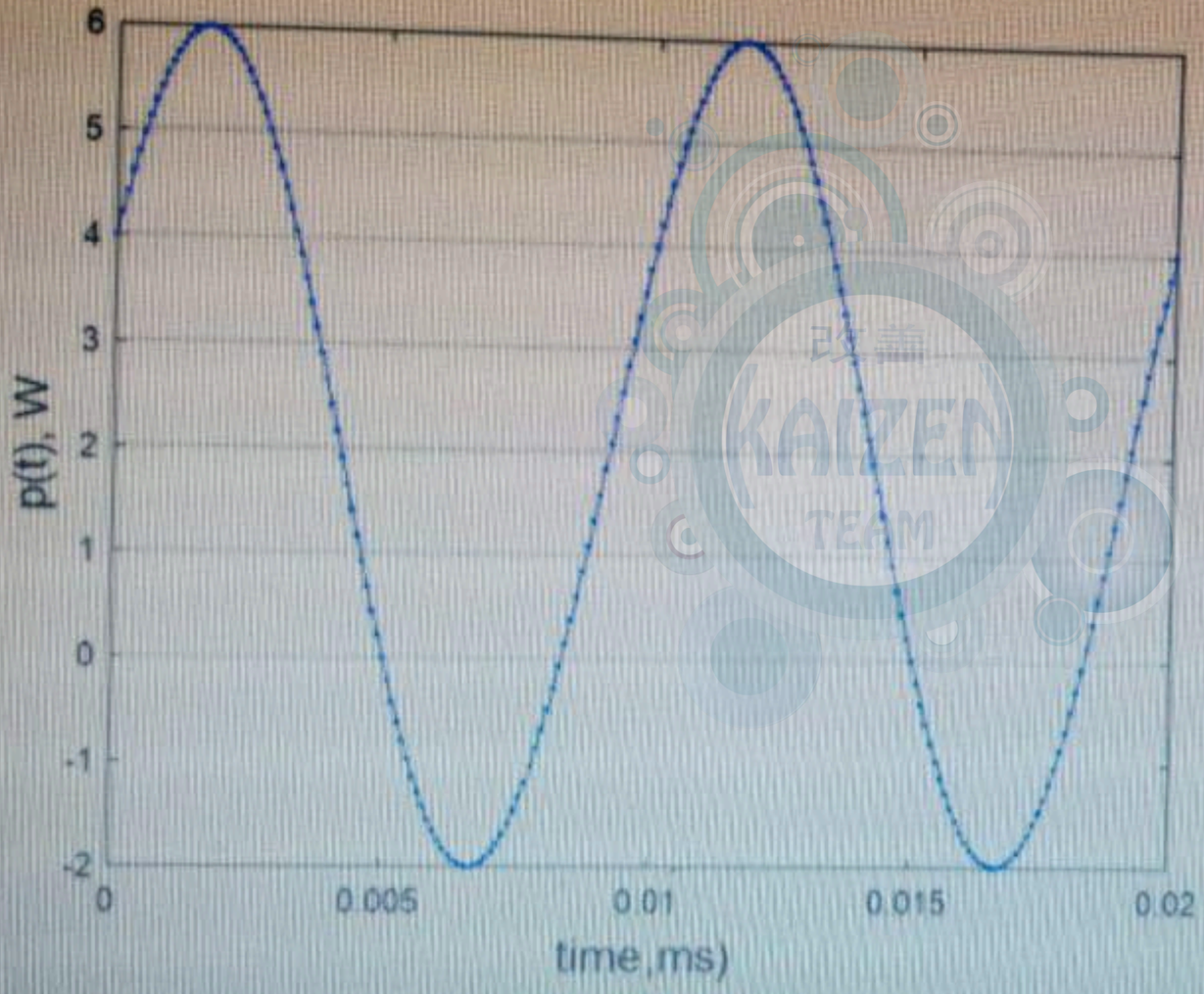
$v_1(t)=10\cos(1000t)$ V



- ☐ $i(t) = 160.9\cos(100\pi t + 147.5^\circ)\,\text{mA}$
- ☐ $Vc = 0.965\angle 57.5^\circ$
- ☐ $Ic = j0.166666 \times Vc$
- ☐ $Vc = \dfrac{\frac{10e^{j30}}{5} + \frac{15e^{j0}}{j8}}{\frac{1}{5} + \frac{1}{-j6} + \frac{1}{j8}} =$
- ☑ $Vc = \dfrac{\frac{10e^{j30}}{5} + \frac{15e^{j0}}{j6}}{\frac{1}{5} + j\frac{1}{8} - j\frac{1}{6}} =$

SUBMIT ANSWER

Given the voltage of $v(t) = 100\cos(wt), V$ across the load and the instantaneous power absorbed / delivered appeared as shown in the figure. The $p(t) = P \pm |S|\cos(2wt + \theta v + \theta i)$

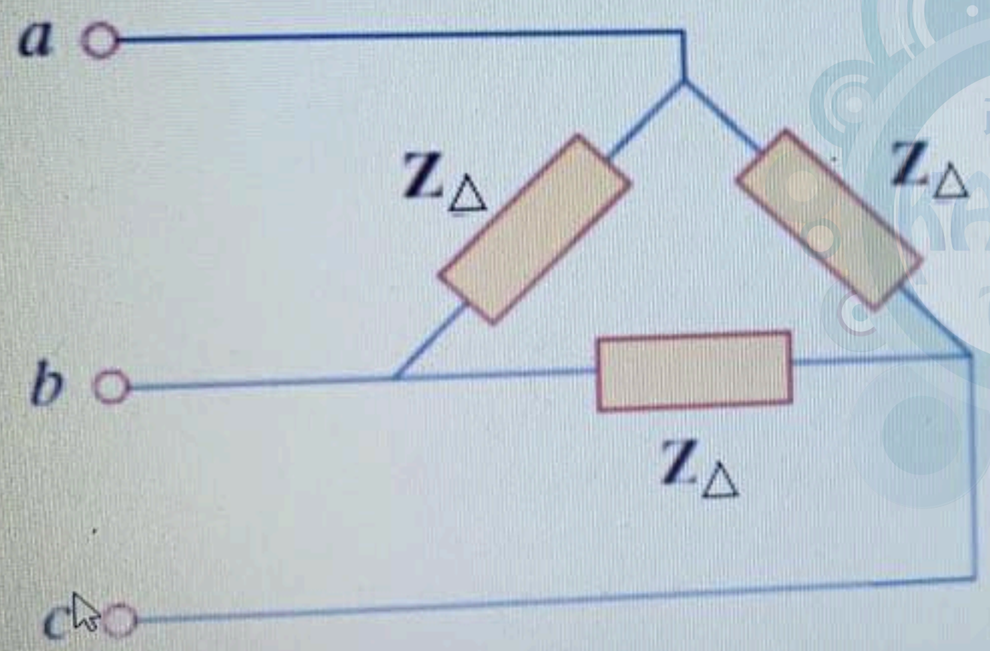


Zoom image

Question 3/13

A three phase balanced voltages supply a Δ-connected balanced load. Given $Vbc = 416\angle 0^{\circ} V(rms)$, $Z_{\Delta} = 7.2\angle 0^{\circ}$ Ω.

Assuming positive sequence (abc).



The line current I_a equals to .....

Question 10/13

A load Z draws 12 kW at a power factor of 0.856 lagging from a 240-V rms sinusoidal source. The load impedance equal to .....

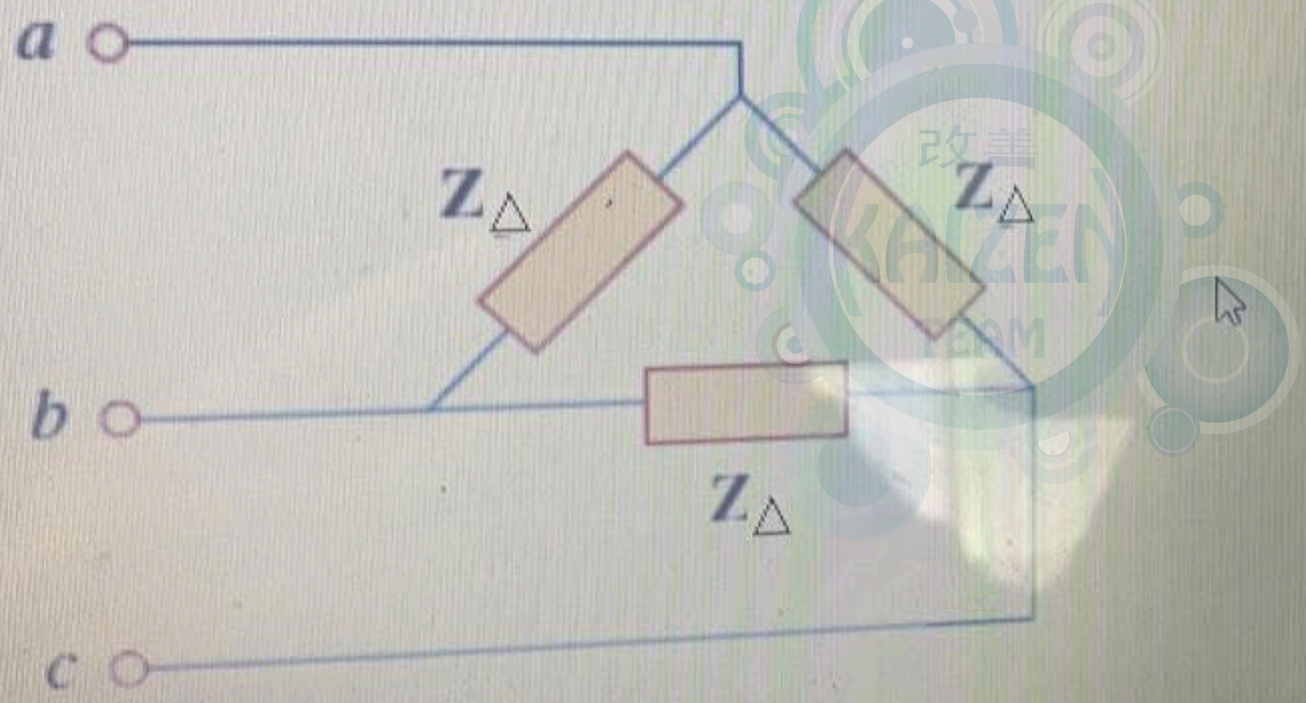
- ○ 1.65 + j 2.28 Ω
- ○ 3.52 + j 2.12Ω
- ○ 3.52 - j 2.12Ω
- ○ 1.65 - j 2.28 Ω

SUBMIT ANSWER

Question 5/13

A three phase balanced voltages supply a Δ-connected balanced load. Given $\mathrm{Vbc} = 416\angle 0^{\circ}\mathrm{V(rms)}$, $Z_{\Delta} = 7.2\angle 30^{\circ}\ \Omega$.

Assuming positive sequence (abc).

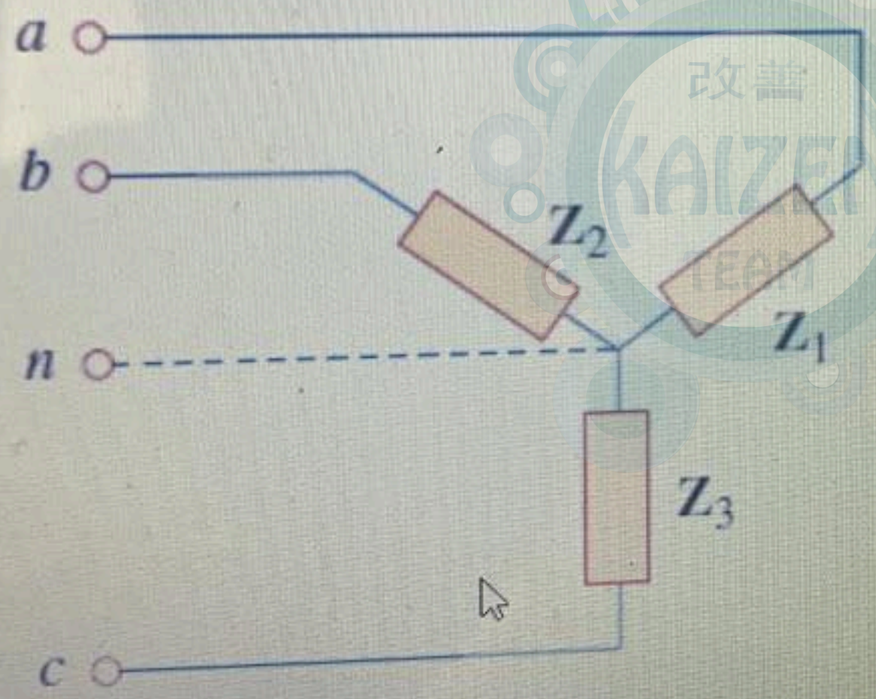


The complex power equals to .....

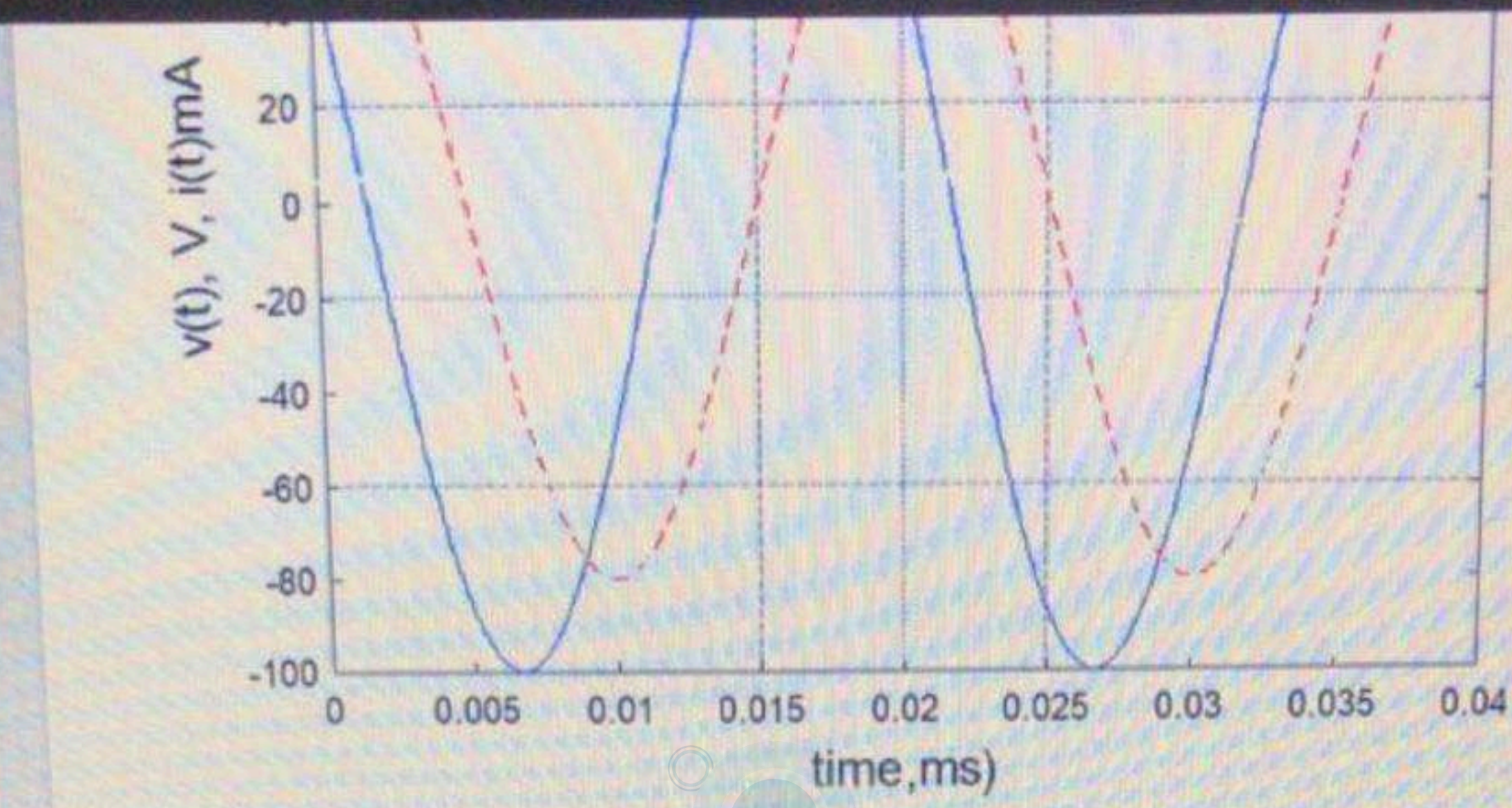
Question 2/13

A three phase balanced voltages supply a Y-connected balanced load. Given $\mathrm{Vca} = 416\angle 30^{\circ}\mathrm{V(rms)}$, $Z_Y = 2.4\angle 36.87\ \Omega$.

Assuming positive sequence (abc)



The current I_{bn} equals to .....

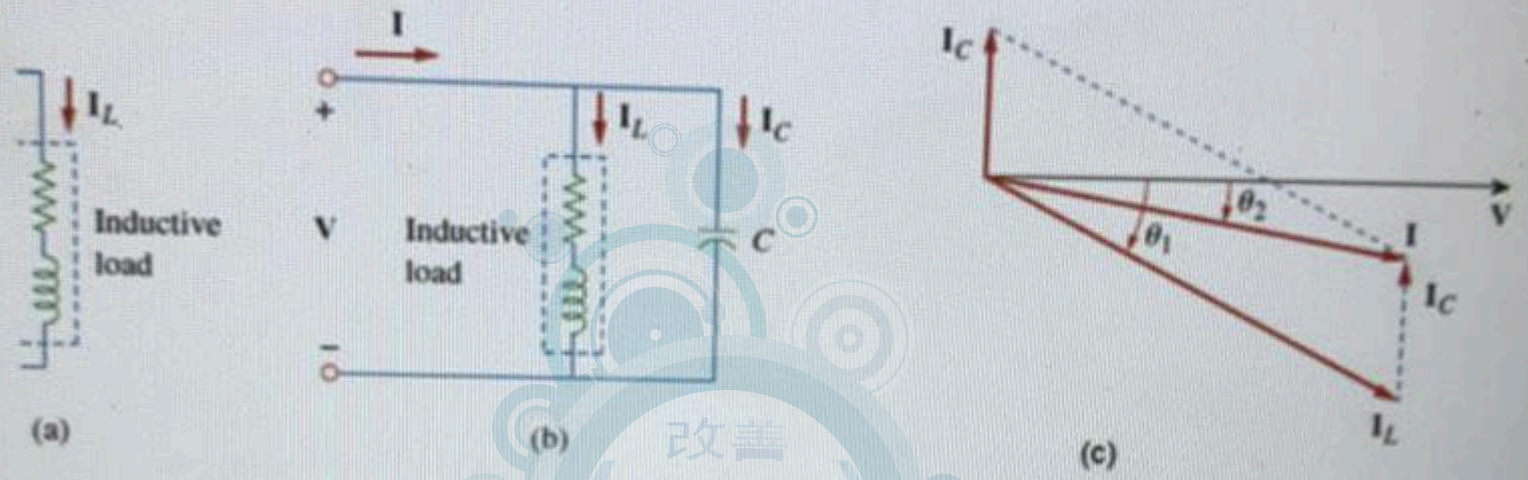


Zoom image

- $R = 0.625\Omega$, $L = 4.4458mH$
- None of these
- $R = 0.625\Omega$, $L = 3.446mH$
- $R = 0.625\Omega$, $C = 3.4458\,\mu F$
- $R = 0.625\Omega$, $C = 34.458\,\mu F$

SUBMIT ANSWER

V = 250-V (rms), 50-Hz, Inductive load **S** = 5 kVA $\angle\theta$. Where: $\theta 1 = -27^\circ$, $\theta 2 = -11^\circ$.



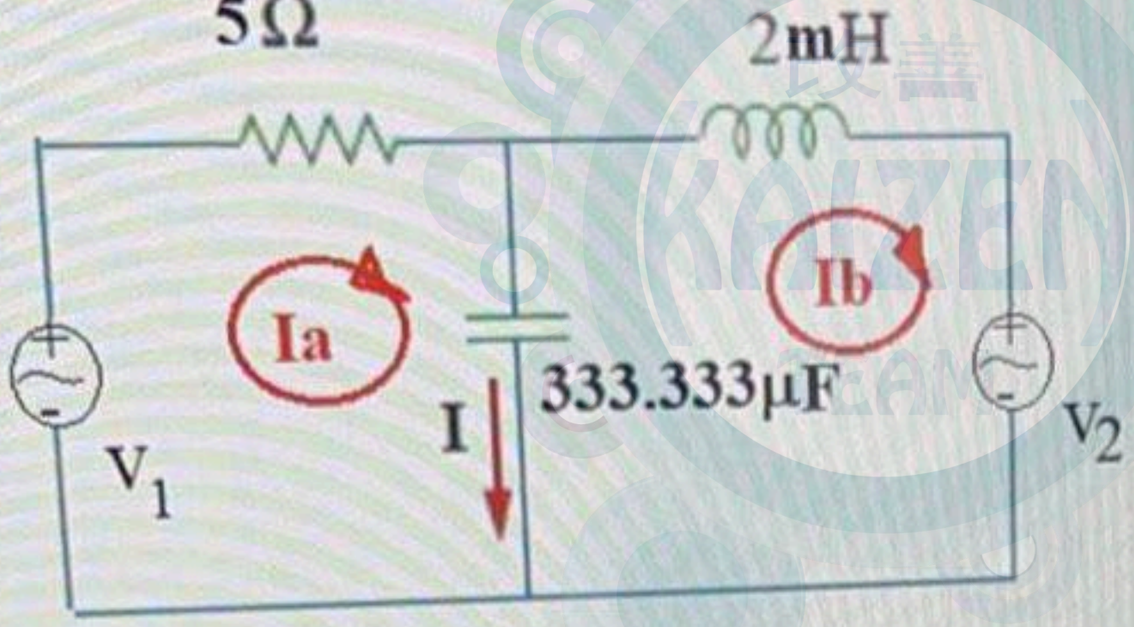
Zoom image

Choose the correct answers.

- ☐ $I_L = 20\angle -11^\circ A$
- ☐ $I = 17.154\angle -36.87^\circ A$
- ☐ $I_C = 5.616\angle -90^\circ A$

Question 1/6 (4 p.)

The source voltages $v1(t) = -10\cos(1000t + 30^\circ), v2(t) = -7\sin(1000t - 30^\circ)$. To find the voltage aross the capacitor $\overline{V}c$ may found by one or more equations as follows.



- ☐ $(5 + j3)Ia - j3Ib = 10\angle 210$

  $-j3Ia - j1Ib = 7\angle 120$

  $Vc = -j3(Ia - Ib)$

- ☐ None of these

Question 3/13

A load Z draws 12 kW at a power factor of 0.856 lagging from a 240-V rms sinusoidal source. The load impedance equal to .....

- ○ 1.65 + j 2.28 Ω
- ○ 1.65 - j 2.28 Ω
- ○ 3.52 + j 2.12Ω
- ○ 3.52 - j 2.12Ω

SUBMIT ANSWER

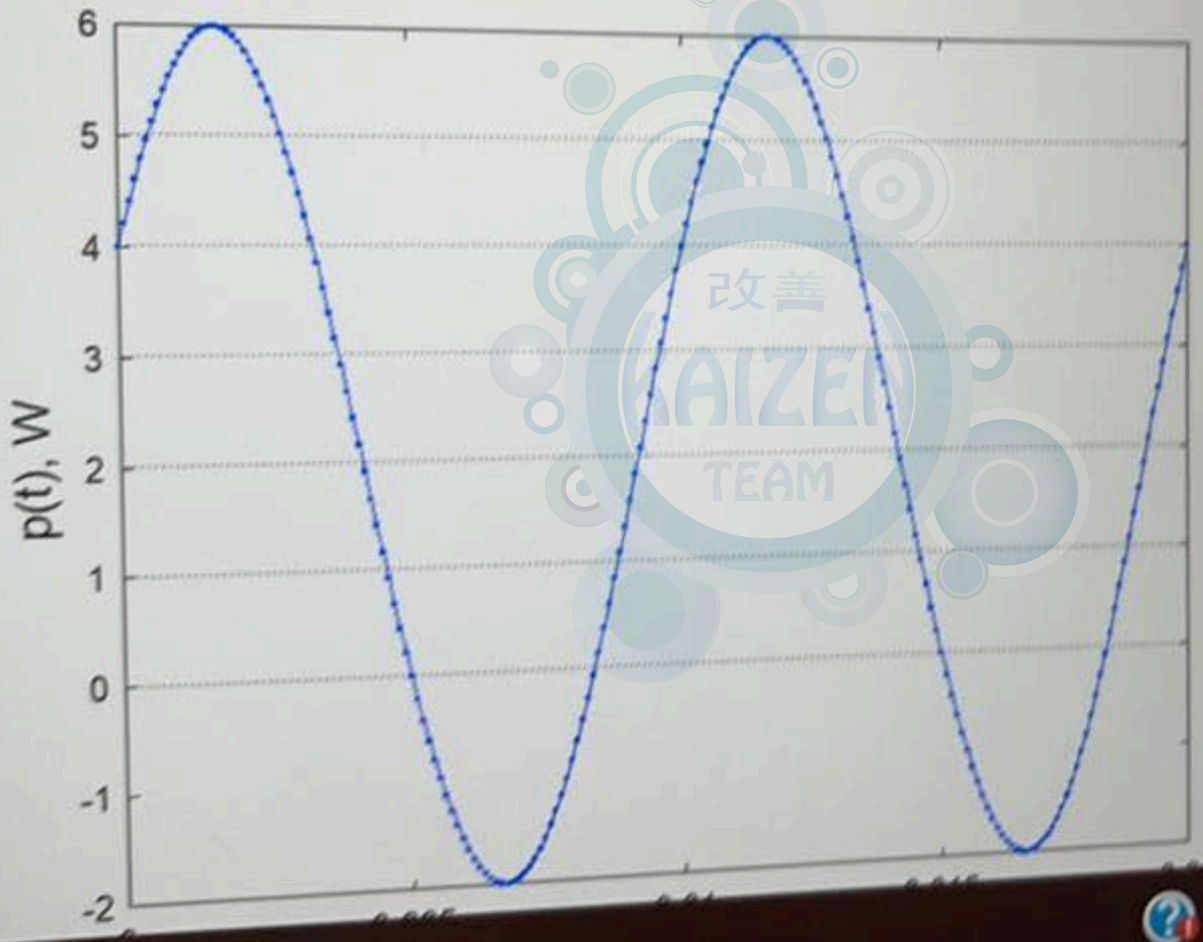
Question 3/13

A load Z draws 12 kW at a power factor of 0.856 lagging from a 240-V rms sinusoidal source. The apparent and reactive powers delivered to the load equals to .....

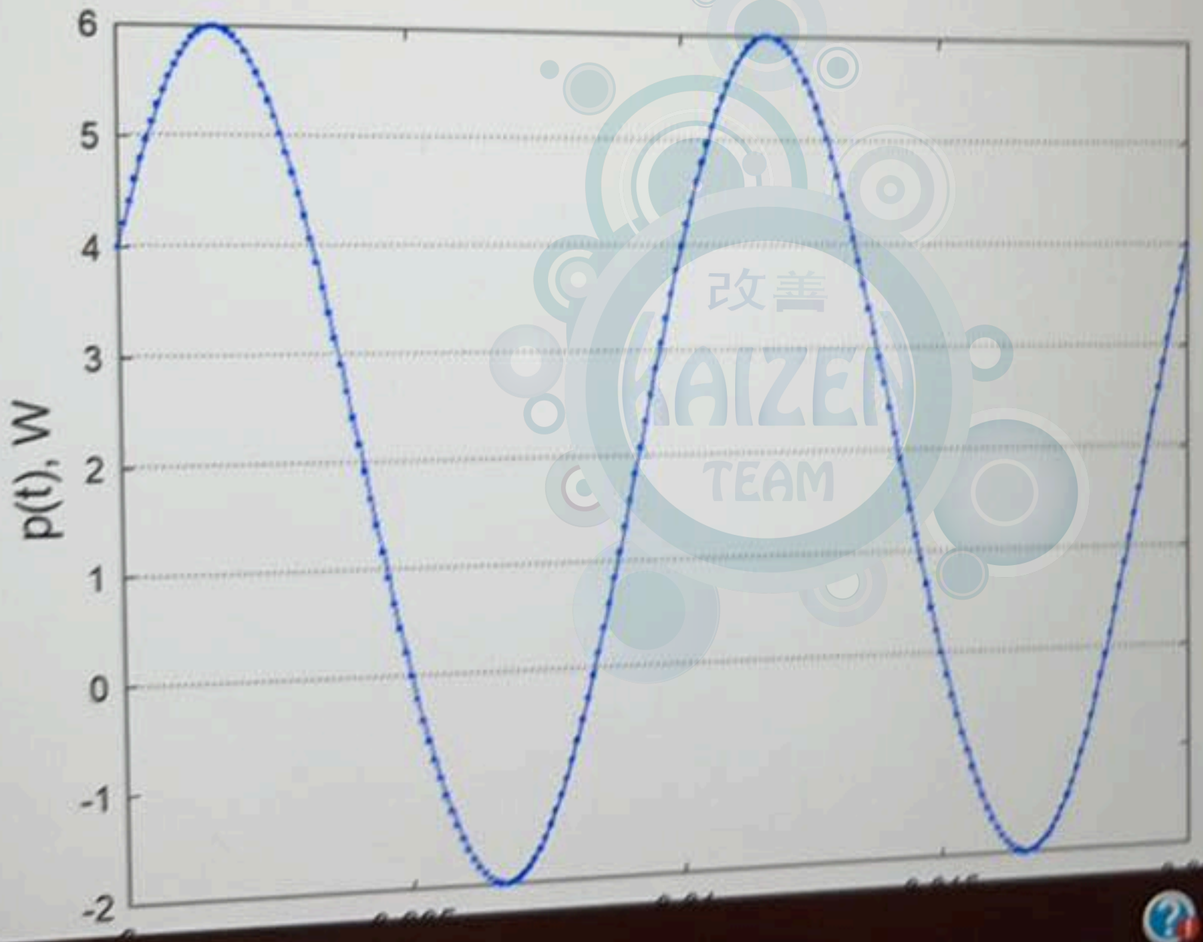
- ○ 15 kVA
  9 kVAR
- ○ 7.25 kW
  14.28 kVA
- ○ 14.02 kVA
  7.25 kVAR
- ○ 20.48 kVA
  16.6 kVAR

SUBMIT ANSWER

Given the voltage of $v(t) = 100\cos(wt), V$ across the load and the instantaneous power absorbed / delivered appeared as shown in the figure. The $p(t) = P \pm |S|\cos(2wt + 0v + 0i)$

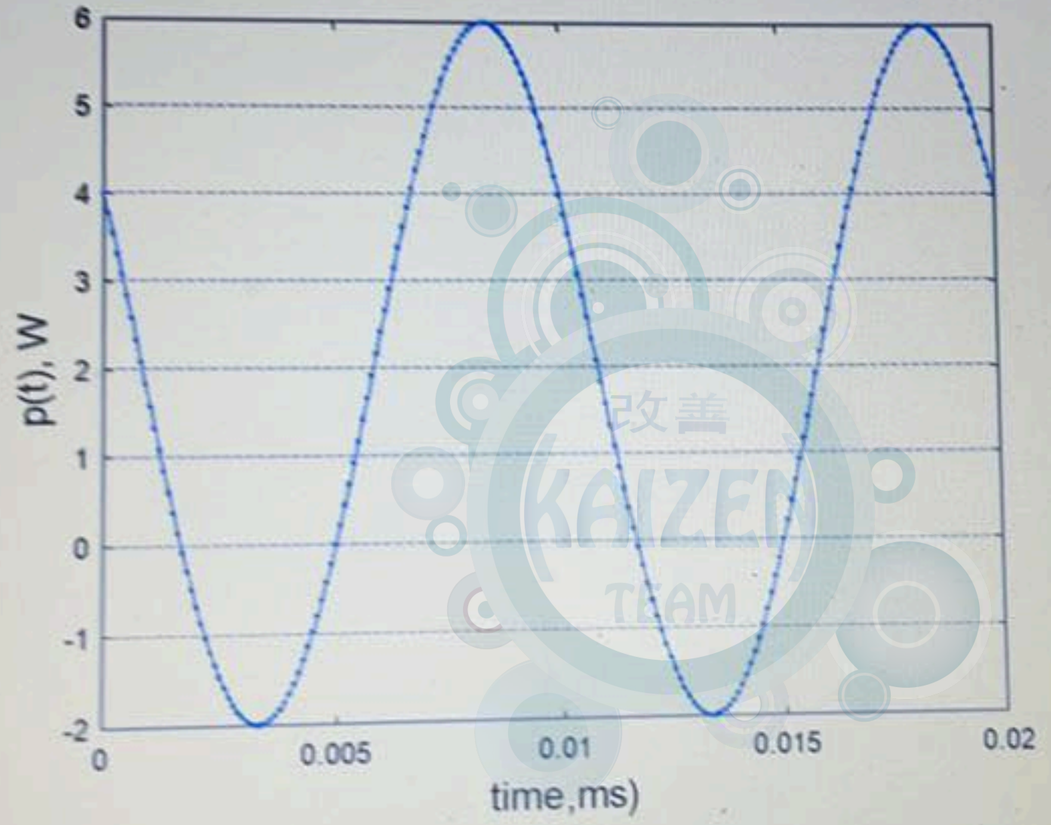


Given the voltage of $v(t) = 100\cos(wt), V$ across the load and the instantaneous power absorbed / delivered appeared as shown in the figure. The $p(t) = P \pm |S|\cos(2wt + 0v + 0i)$



Spring Se... ...

Given the voltage of $v(t) = 100\cos(wt), V$ across the load and the instantaneous power absorbed / delivered appeared as shown in the figure. The $p(t) = P \pm |S|\cos(2wt + \theta v + \theta i)$



Zoom image

The values of reactive power Q and power angle θ are:

Q = ..., VAR,

Question 4/5 Answer is mandatory

The v(t) and i(t) across a load are given by $\mathrm{v(t)=250cos(wt)V,\ \ i(t)=200cos(wt+60^{\circ})mA}$, respectively. Then, the impedance of the load in Ω is:

- [ ] $625+\mathrm{j}1082.5$
- [ ] $0-\mathrm{j}1250.0$
- [ ] $0+\mathrm{j}1250.0$
- [ ] $883.88-\mathrm{j}883.88$
- [ ] $1082.5-\mathrm{j}625.0$
- [ ] $883.88+\mathrm{j}883.88$
- [x] $625-\mathrm{j}1082.5$
- [ ] $1082.5+\mathrm{j}625.0$

SUBMIT ANSWER

3 Exams Group - S... ···

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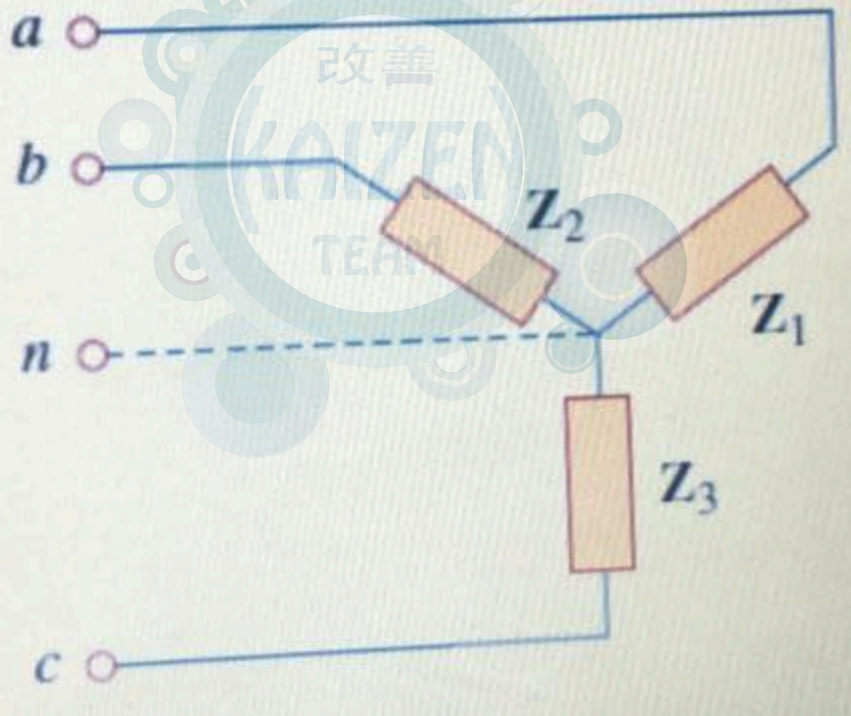
Question 1/13

A three phase balanced voltages supply a Y-connected balanced load. Given $\mathrm{Vcn} = 240\angle 20^{\circ}\mathrm{V(rms)}$, $Z_Y = 2.4\angle 36.87\ \Omega$.

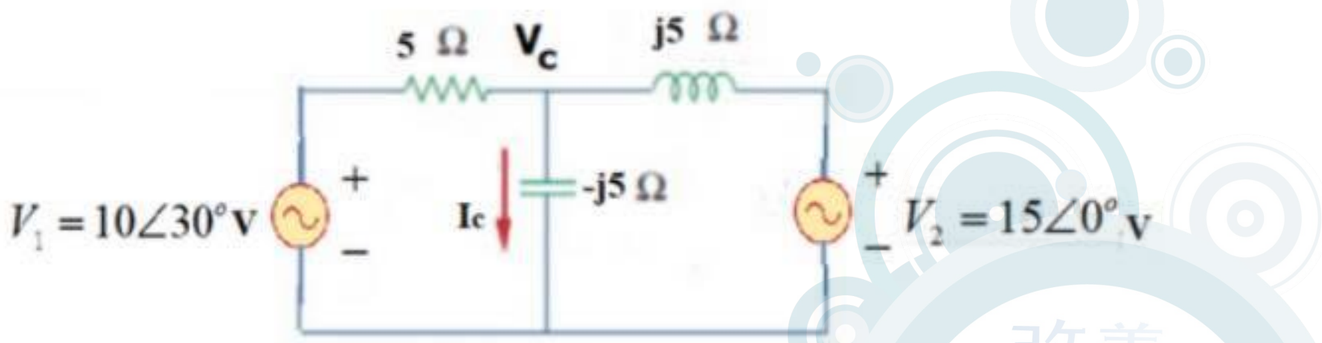
Assuming positive sequence (abc).



80°F Sunny

Question 2/5 Answer is mandatory

Find Ic(A)and Vc(V)respectively, for the circuit shown.



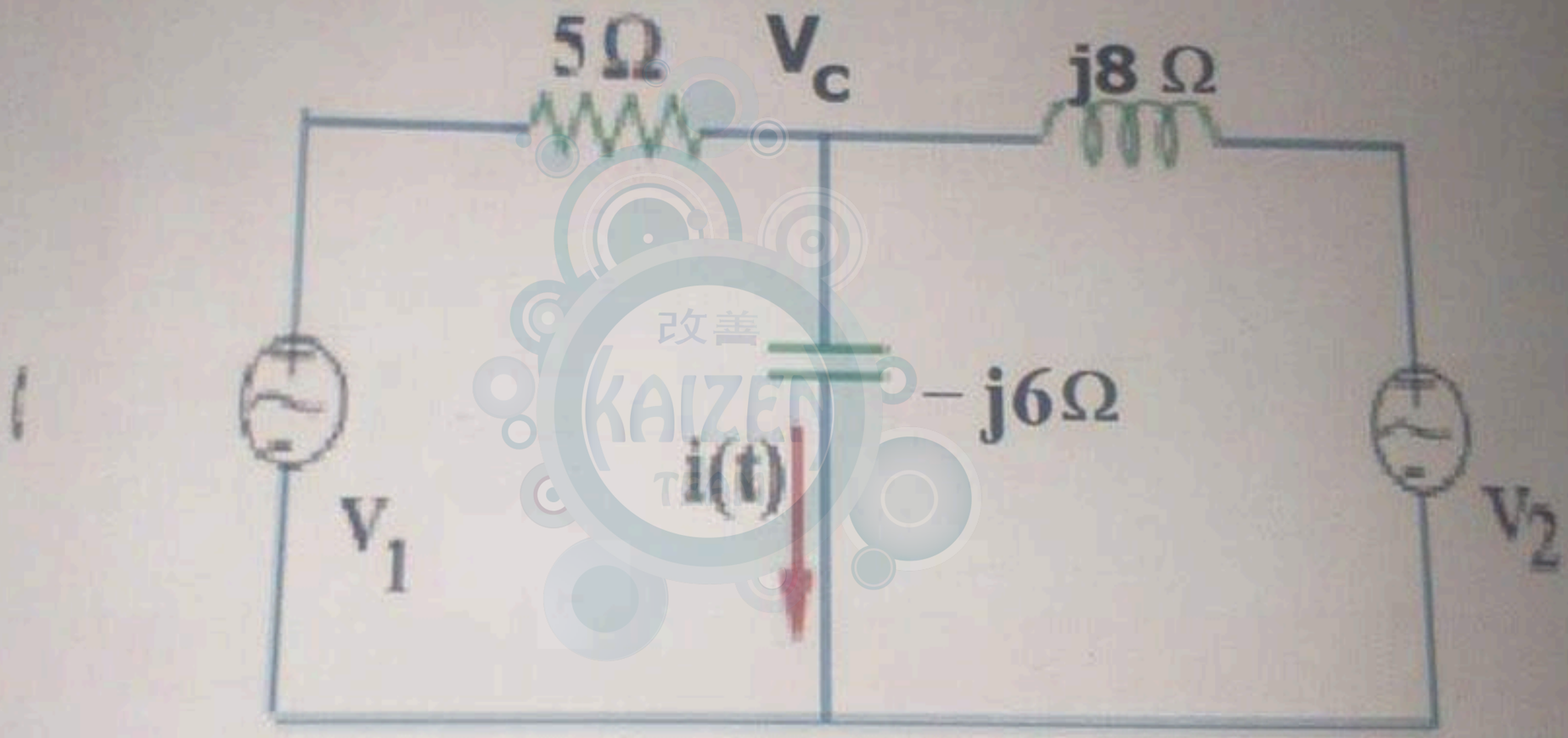
- [ ] $\mathrm{Ic} = 2.7343 + \mathrm{j}2.5523, \mathrm{Vc} = 12.7615 - \mathrm{j}13.6716$
- [ ] $\mathrm{Ic} = 1.9375 + \mathrm{j}1.0677, \mathrm{Vc} = 5.3386 - \mathrm{j}9.6875$
- [ ] $\mathrm{Ic} = 0.9870 + \mathrm{j}1.2377, \mathrm{Vc} = 7.4262 - \mathrm{j}5.9221$
- [x] $\mathrm{Ic} = 2.0000 + \mathrm{j}1.7320, \mathrm{Vc} = 8.6600 - \mathrm{j}10.0000$
- [ ] $\mathrm{Ic} = 1.7737 - \mathrm{j}2.6916, \mathrm{Vc} = -2.6916 - \mathrm{j}1.7737$

SUBMIT ANSWER

A load Z draws 12 kW at a power factor of 0.586 lagging from a 240-V rms sinusoidal source. The apparent and reactive powers delivered to the load equals to .....

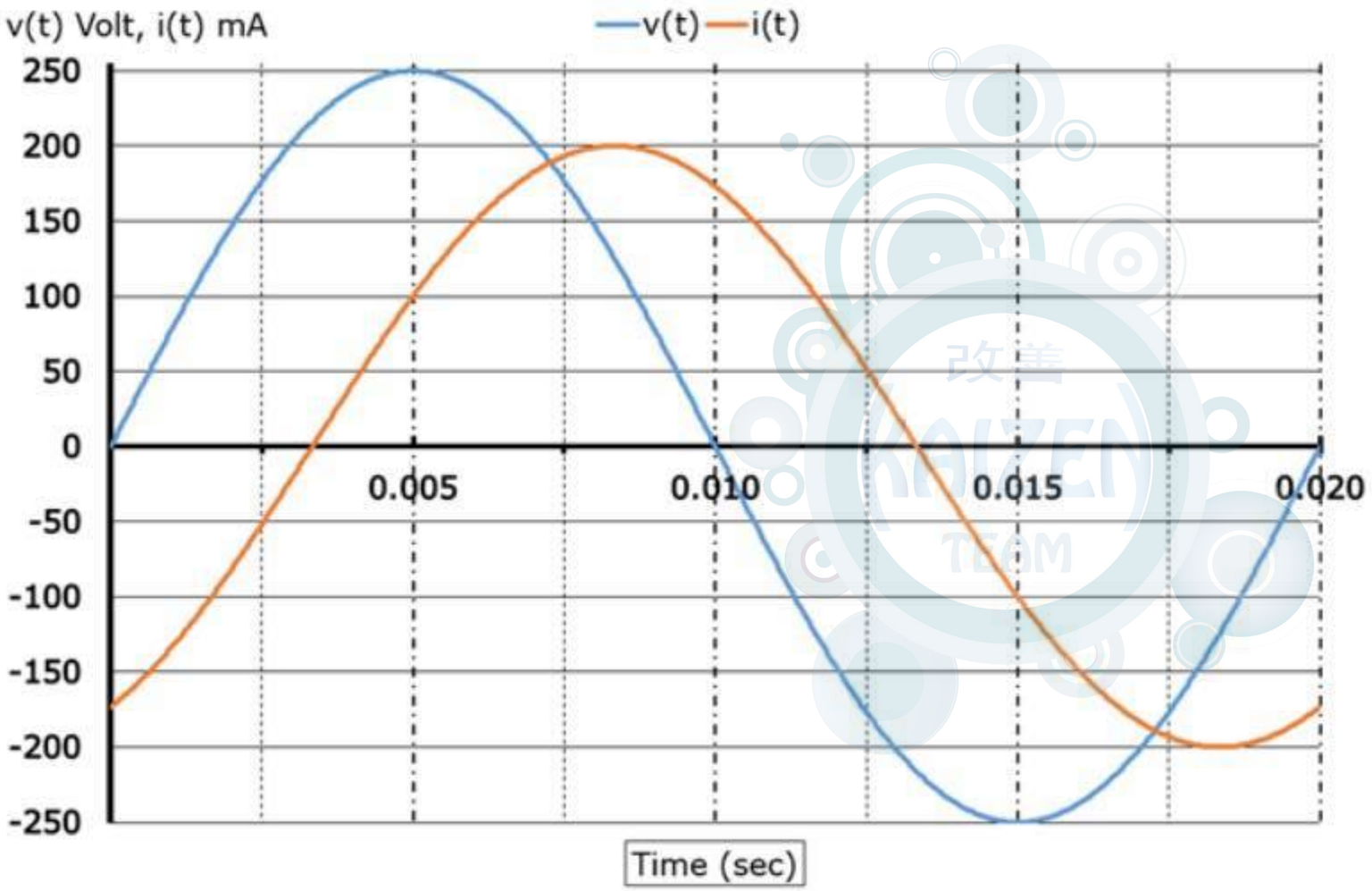
- ○ 15 kVA
  9 kVAR
- ○ 14.02 kVA
  7.25 kVAR
- ◉ 20.48 kVA
  16.6 kVAR
- ○ 7.25 kVA
  14.02 kVAR

SUBMIT ANSWER

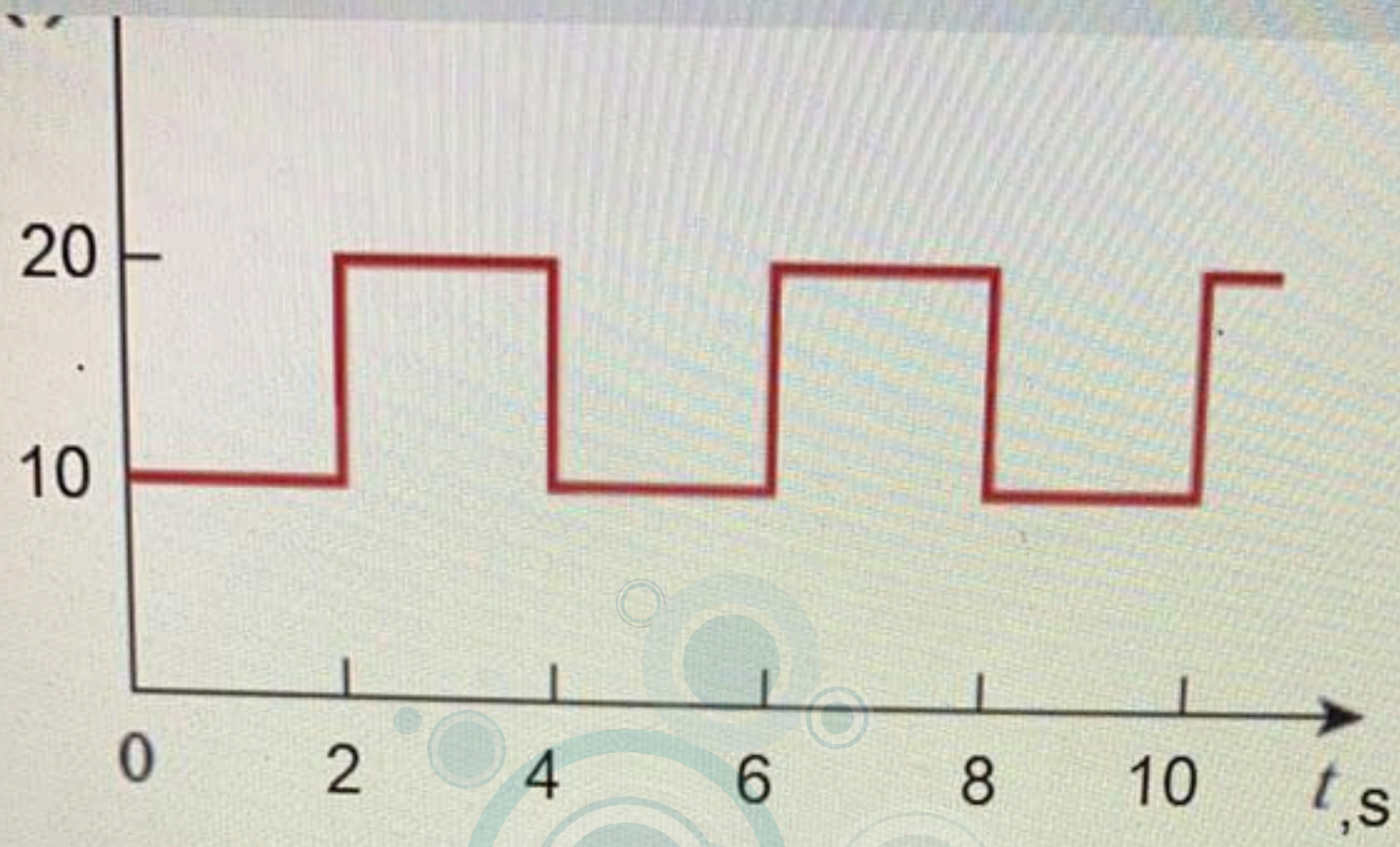

5 Ω
V_c
j8 Ω
– j6Ω
i(t)
V_1
V_2

Question 5/5 Answer is mandatory

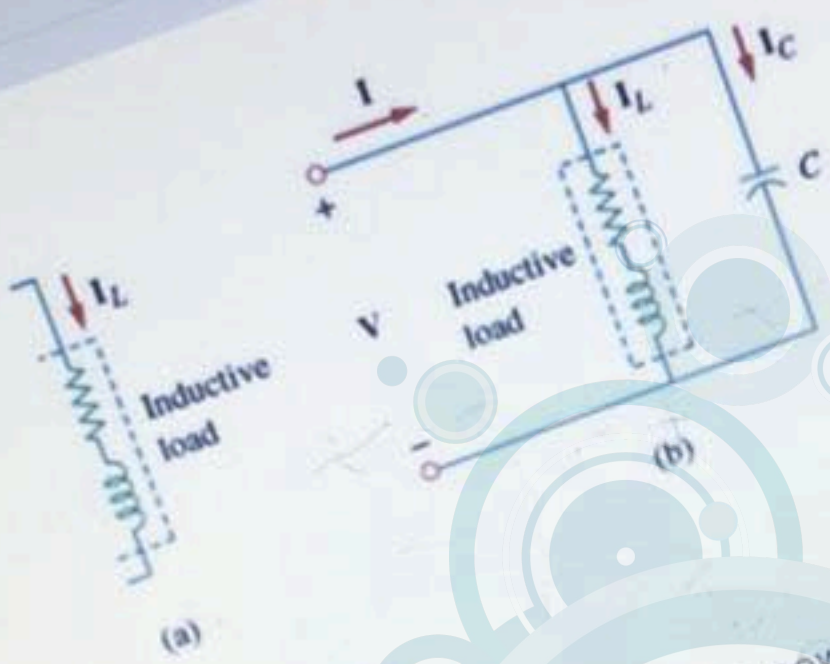
The figure shows v(t) and i(t) across a load. Then, the expression of the current i(t) is given in the form of:

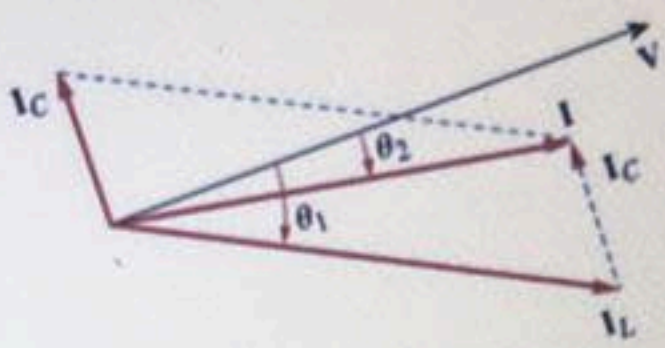


☐ $i(t) = 200\cos(100\pi t - 60^{\circ})\text{mA}$



- ○ 15.811V
- ○ 11.14
- ○ None of these
- ○ 9.811V
- ○ 14.14V
- ○ 8.736V





(c)

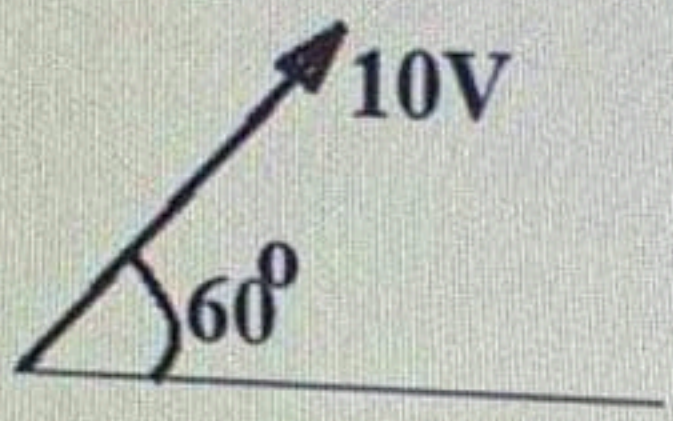
Zoom image

The size of the capacitor to raise the power factor to pf = $\cos(-11^\circ)$.

- 0.715mF
- 7.15pF
- 517μF
- None of these
- 71.5μF

Zoom image

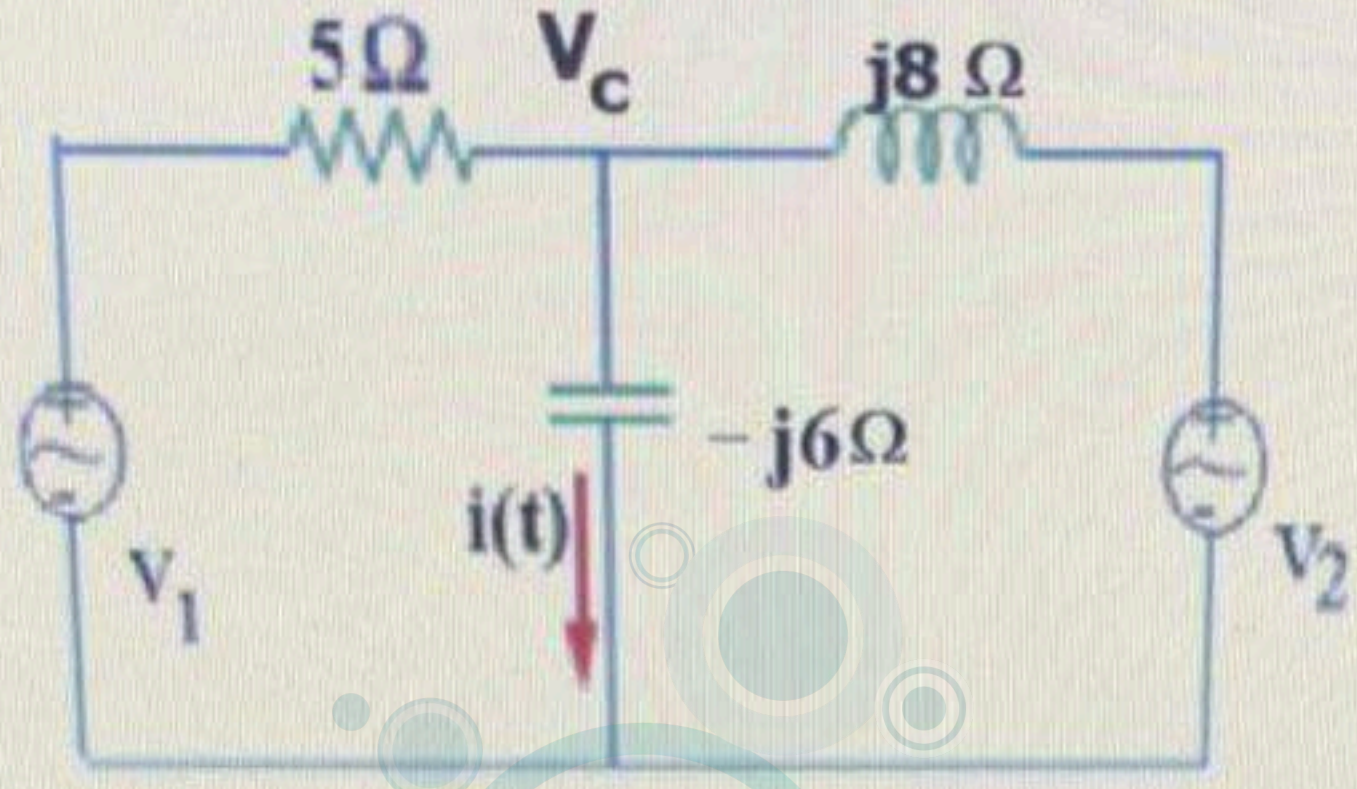
- [x] $v(t) = \text{real}\{10e^{j(100\pi t - \frac{\pi}{3})}\}$
- [ ] at: $t = 0.0\text{ms}$ the phasor lock like



- [x] $v(t = 0.0216666\overline{6}) = 8.7\text{V}$
- [ ] $v(t) = -10\sin(100\pi t + 30^\circ)$
- [ ] $f = 100\text{Hz}$
- [x] $v(t) = -10\sin(100\pi t - 150^\circ)$
- [ ] at: $t = 0.0\text{ms}$ the phasor repesents as

Question 4/6 (5 p.)

Use any technique to find the **i(t)**, and $\mathbf{V_c}$, if $V_1 = 10\angle 30$ and $V_2 = 15\angle 0$, and f=50Hz.

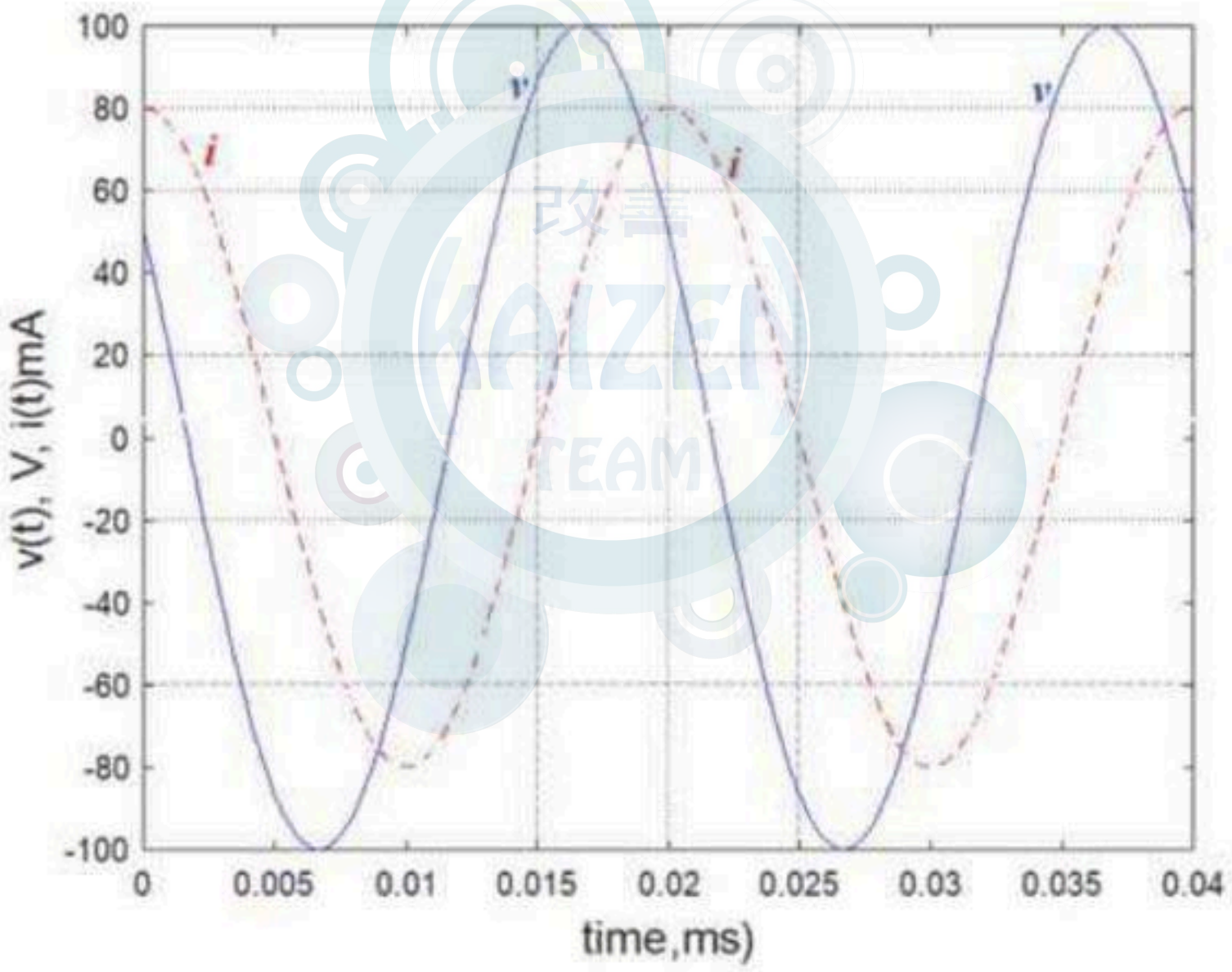


$$V_c = \frac{\frac{10\angle 30}{5} + \frac{15\angle 0}{j8}}{\frac{1}{5} + \frac{1}{j8} - \frac{1}{-j6}} =$$

Time left to complete the test: 0 h 11 min. 2 sec.

Question 5/6 (3 p.)

The voltage across an impedance and current flown through it are shown. The elements may have extracted in series are ……

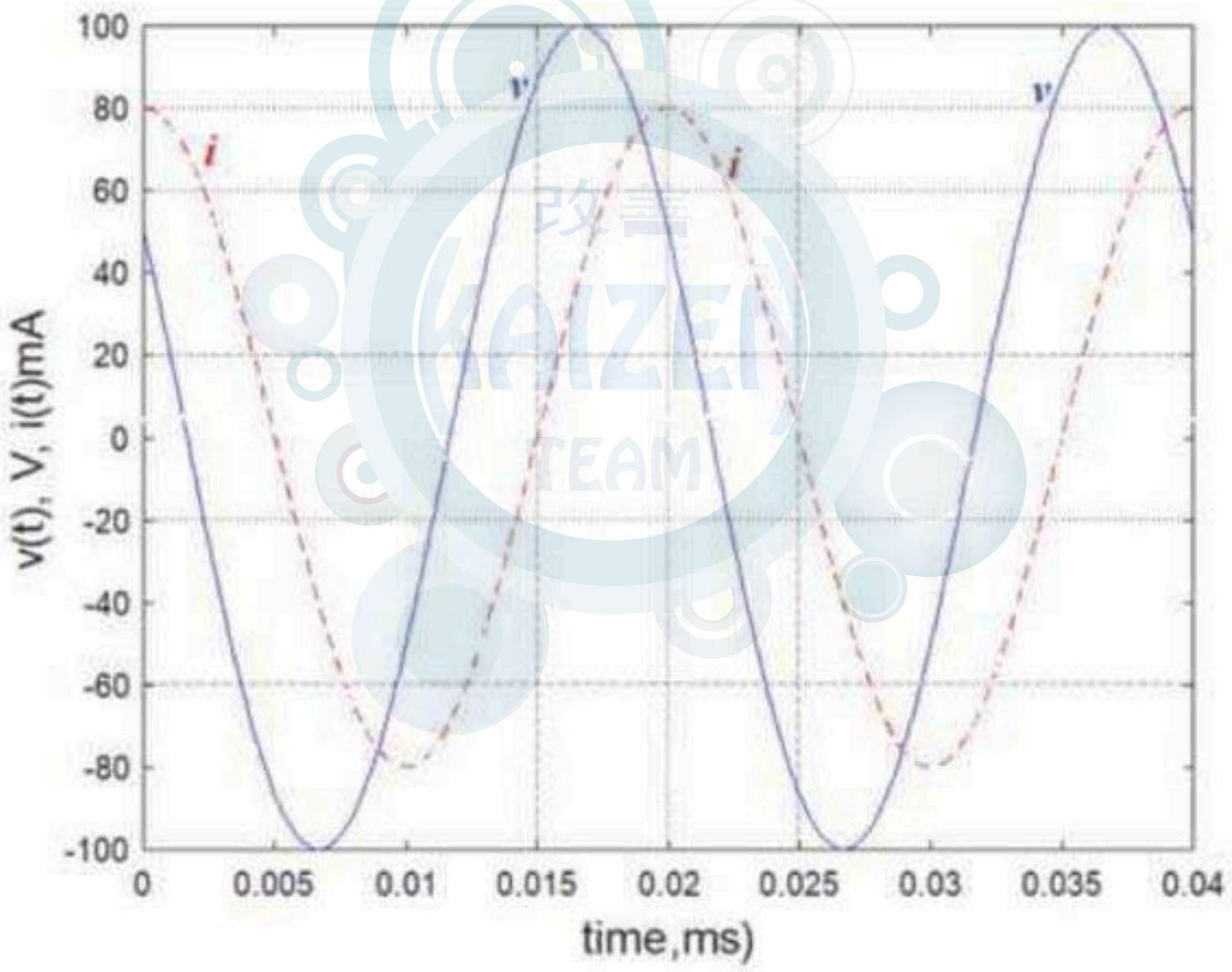


- None of these
- $\mathrm{R} = 0.625\Omega \ , \mathrm{L} = 3.446\mathrm{mH}$
- R=0.625Ω ,C=34.458 μF

Time left to complete the test: 0 h 11 min. 2 sec.

Question 5/6 (3 p.)

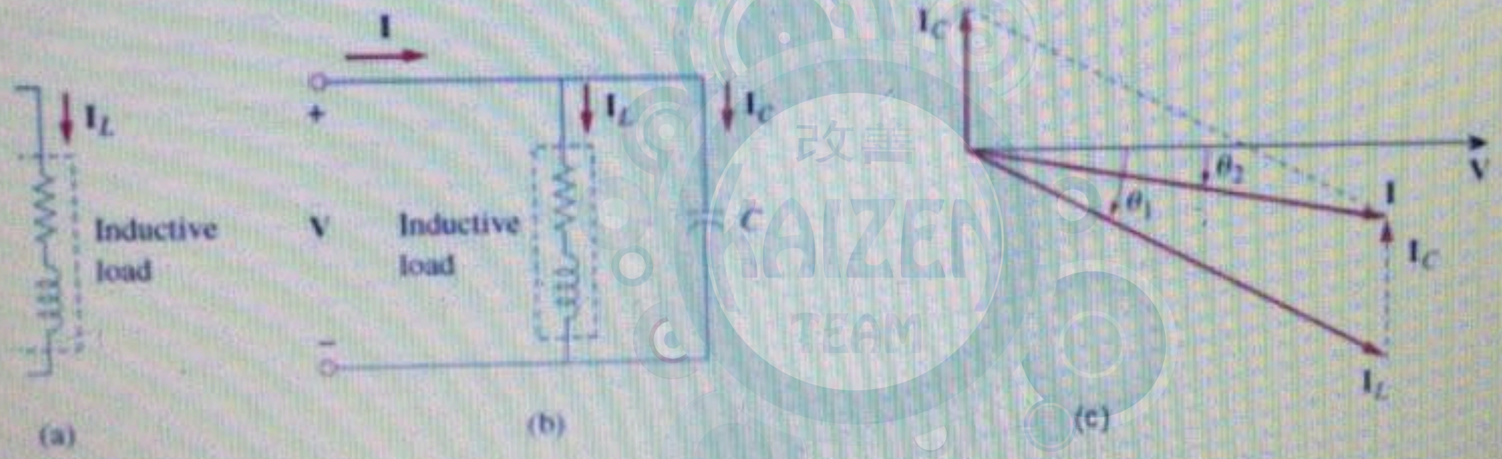
The voltage across an impedance and current flown through it are shown. The elements may have extracted in series are ……



- None of these
- $\mathrm{R} = 0.625\Omega \ , \mathrm{L} = 3.446\mathrm{mH}$
- R=0.625Ω ,C=34.458 μF

Question 4/13

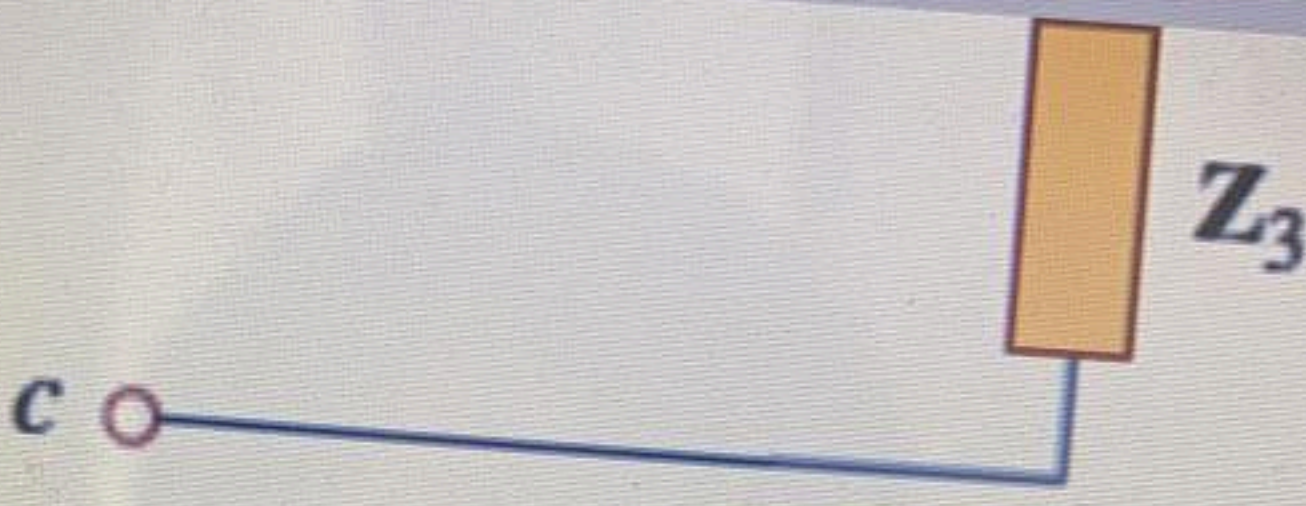
V = 250-V (rms), 50-Hz, Inductive load **S** = 5 kVA $\angle\theta$. Where: $\theta 1 = -27^\circ$, $\theta 2 = -11^\circ$.



Zoom image

Choose the correct answers.

☐ $I_L = 16\angle -11^\circ A$



The current I_{bn} equals to .....

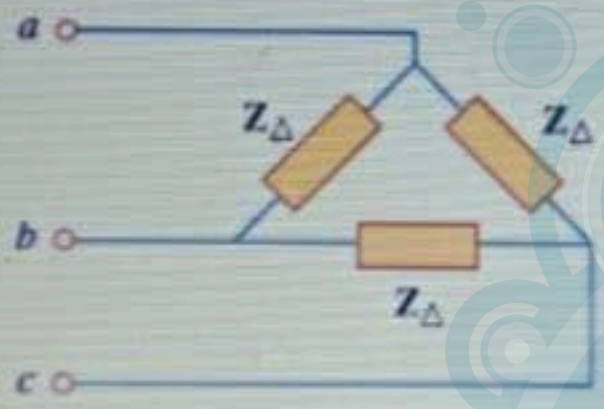
- $100\angle -103.13^{\circ}\text{A}$
- $10\angle 136.87^{\circ}\text{A}$
- $100\angle -136.87^{\circ}\text{A}$
- $100\angle 176.87^{\circ}\text{A}$
- $100\angle 83.13^{\circ}\text{A}$

SUBMIT ANSWER

Question 1/13

A three phase balanced voltages supply a Δ-connected balanced load. Given $V_{bc} = 416\angle 0^\circ V(rms)$, $Z_\Delta = 7.2\angle 0^\circ \Omega$.

Assuming positive sequence (abc).



The line current I_b equals to ....

- $100\angle -30^\circ A$
- $57.73\angle 0^\circ A$
- $100\angle 0^\circ A$
- $57.73\angle 120^\circ A$
- $100\angle 90^\circ A$

SUBMIT ANSWER

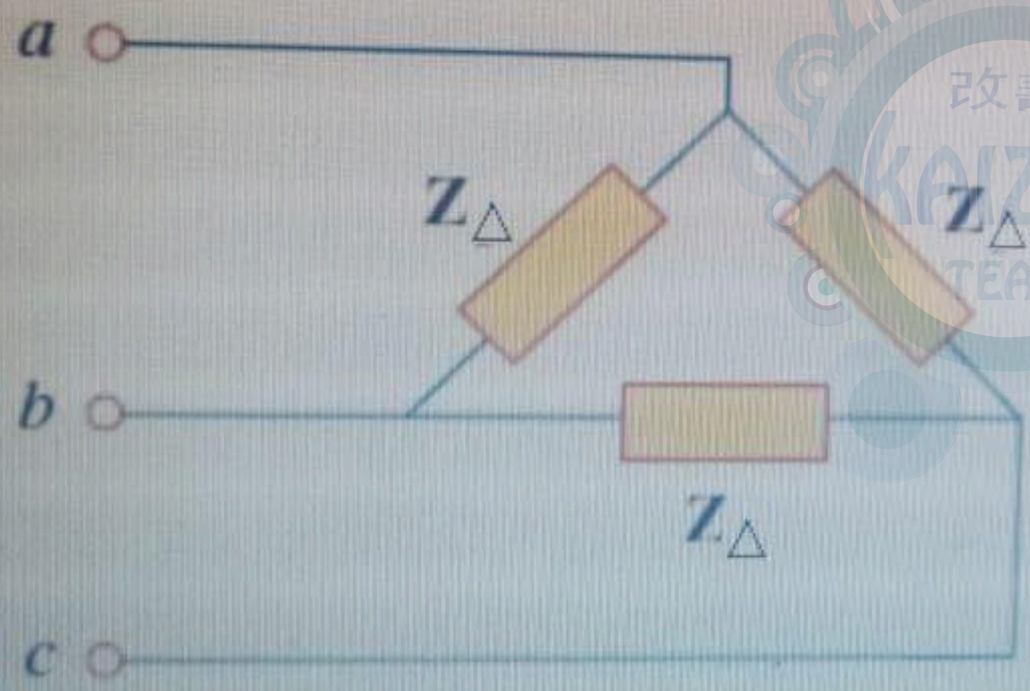
Time left to complete the test: 0 h 30 min. 49 sec.

Question 4/13

○ 11.14

A three phase balanced voltages supply a Δ-connected balanced load. Given $Vcb = 240\angle 20^{\circ} V(rms)$, $Z_{\Delta} = 7.2\angle 36.87\Omega$.

Assuming positive sequence (abc)

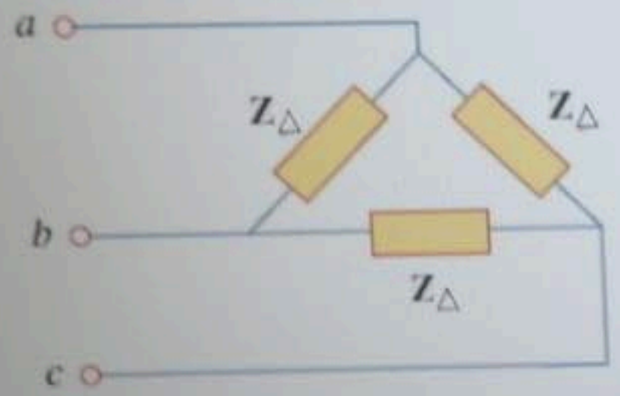


The voltage V_{ac} equals to .....

Question 4/13

A three phase balanced voltages supply a Δ-connected balanced load. Given $Vcb = 240\angle 20^{\circ}V(rms)$, $Z_{\Delta} = 7.2\angle 36.87\Omega$.

Assuming positive sequence (abc)



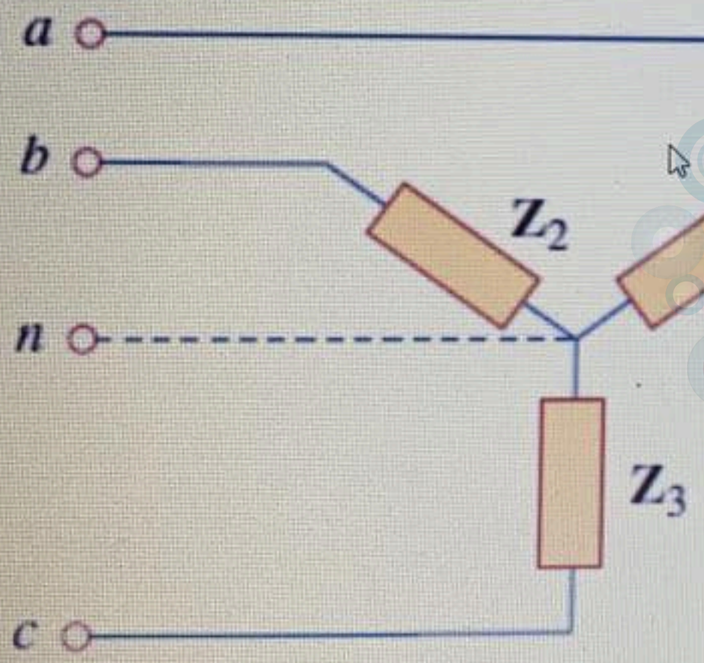
The voltage V_{ac} equals to .....

- $240\angle 130^{\circ}V$
- $240\angle -100^{\circ}V$
- $416\angle -70^{\circ}V$
- $416\angle 170^{\circ}V$

Question 1/13

A three phase balanced voltages supply a Y-connected balanced load. Given $\mathrm{Vab} = 416\angle 0^{\circ}\mathrm{V(rms)}$, $Z_Y = 2.4\angle -30^{\circ}\ \Omega$.

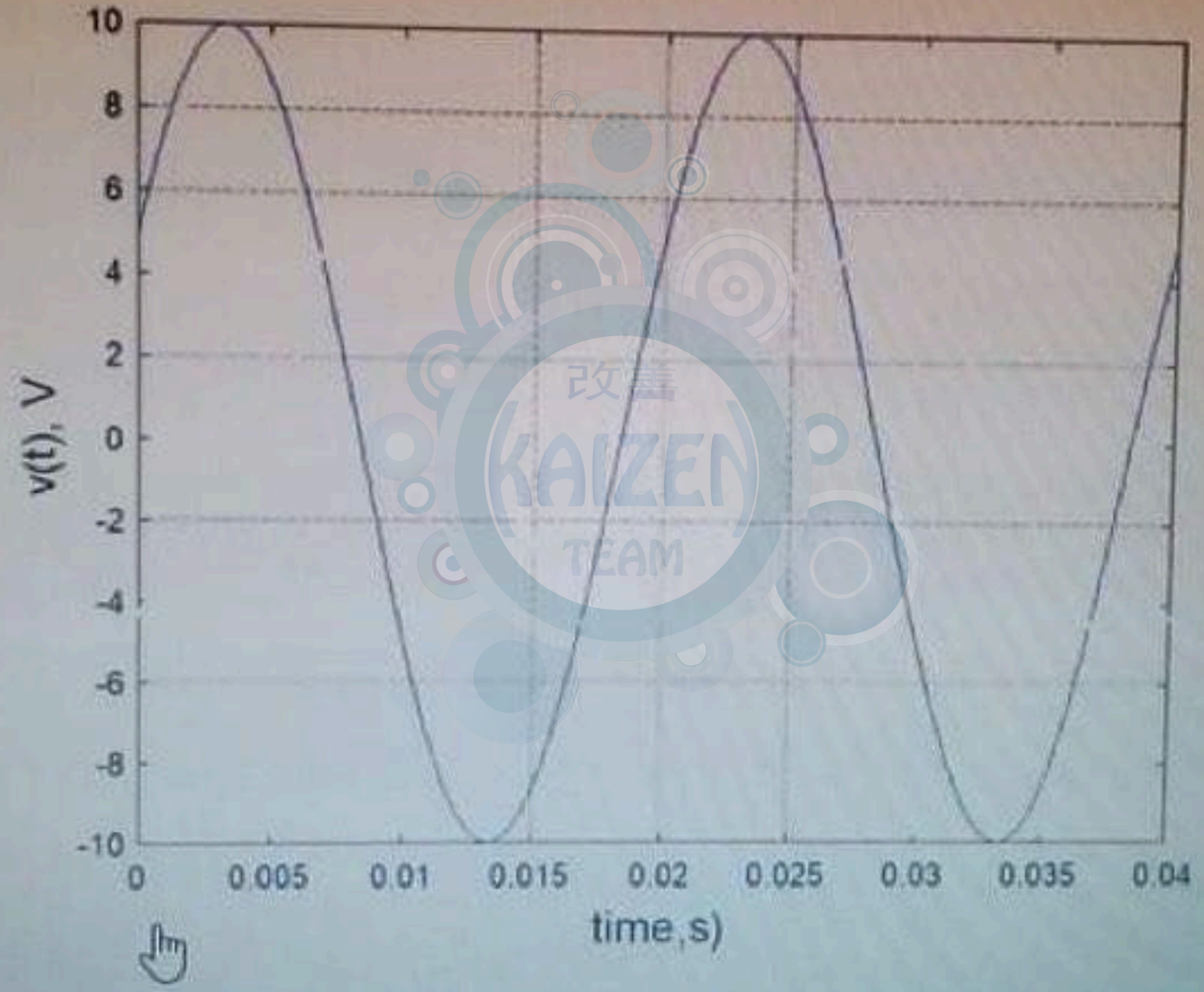
Assuming positive sequence (abc)



The complex power equals to .....

- ○ $100\angle 30\mathrm{kVA}$

For the signal shown, there are more than one correct answer. Choose them



Zoom image

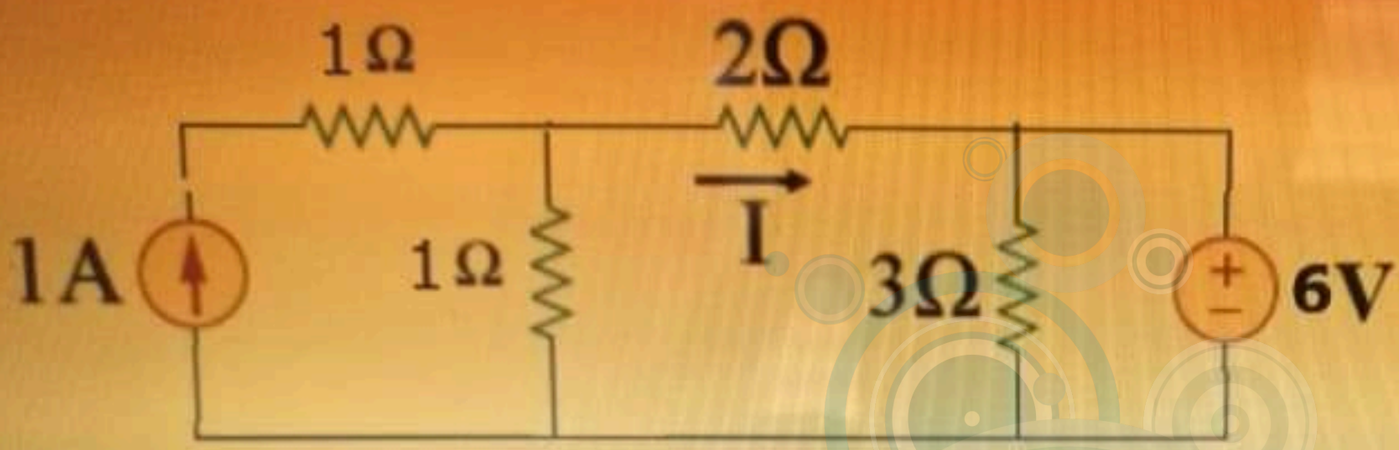
Question 7/13

A load Z draws 12 kW at a power factor of 0.586 lagging from a 240-V rms sinusoidal source. The load impedance equal to .....

- 3.52 - j 2.12Ω
- 3.52 + j 2.12Ω
- 1.65 - j 2.28 Ω
- 1.65 + j 2.28 Ω

SUBMIT ANSWER

Using superposition theorem to find the contributions of the voltage source and the current source in the total value of the current given, respectively as:

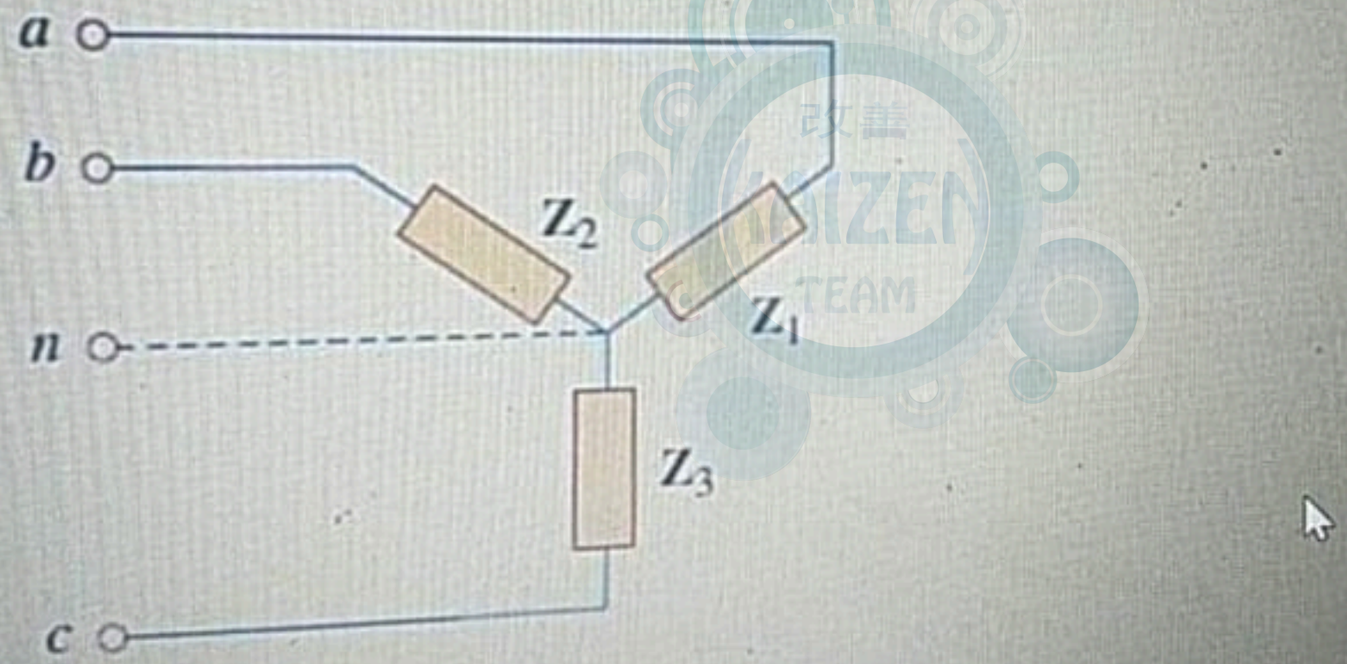


- 2, 0.67
- -0.33, 0.33
- -1, 0.33
- -2, 0.67
- -0.67, 0.33

Question 5/13

A three phase balanced voltages supply a Y-connected balanced load. Given $V_{cn} = 240\angle 20^{\circ} V_{(rms)}$, $Z_Y = 2.4\angle 36.87\ \Omega$.

Assuming positive sequence (abc).



The voltage V_{bc} equals to .....

Question 3/8

Use Nodal analysis to find V1 and V2 respectively in [V].

Question 3/8

Use Nodal analysis to find V1 and V2 respectively in [V].

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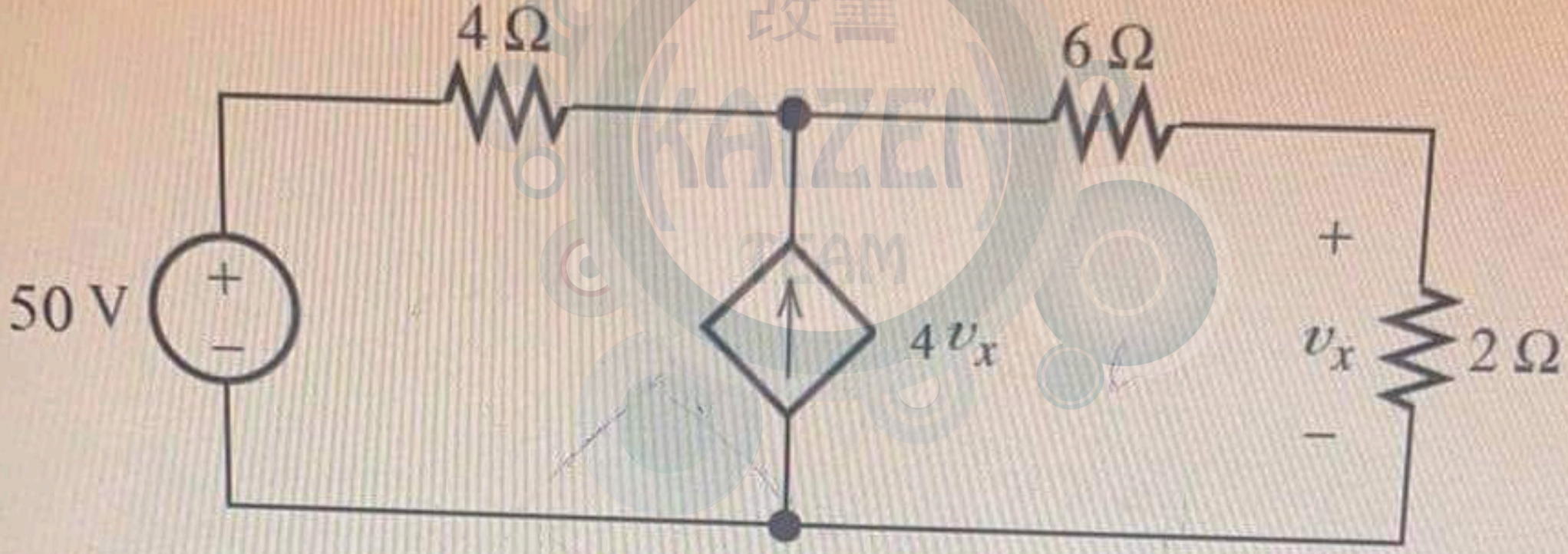
Time left

Question 7/8

Find the power generated by the dependent source in (W)



- 128
- 16
- 160