



reviewer3@nptel.iitm.ac.in ▼

Courses » Basic Electrical Circuits

Announcements

Course

Ask a Question

Progress

Mentor

FAQ

Unit 3 - Week 1: Preliminaries; Current and voltage; Electrical elements and circuits; Kirchhoff's laws; Basic elements; Linearity

Course outline

How to access the portal

Pre-requisite Assignment

Week 1:
Preliminaries;
Current and voltage;
Electrical elements and circuits;
Kirchhoff's laws;
Basic elements;
Linearity

- Preliminaries
- Current
- Voltage
- Electrical elements and circuits
- Kirchhoff's current law(KCL)
- Kirchhoff's voltage law(KVL)
- Voltage source
- Current source
- Resistor
- Capacitor
- Inductor
- Mutual inductor
- Linearity of elements
- Quiz : Assignment 1
- Week 1 - Feedback: Basic Electrical Circuits

Week 2: Elements in series and parallel; Controlled sources

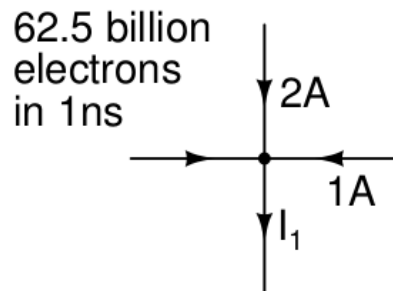
Week 3: Power and

Assignment 1

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2018-08-15, 23:59 IST.

1) Determine the current I_1 in the figure below.



(The answer must be in amperes (A). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

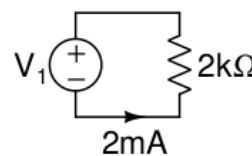
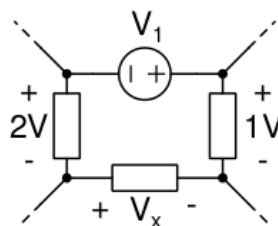
Score: 0

Accepted Answers:

(Type: Numeric) -7

1 point

2) In the figure below, determine the voltage V_x in (a). The voltage source V_1 is such that when it is connected to a $2\text{ k}\Omega$ resistor, a current flows as shown in (b).



© 2014 NPTEL - Privacy & Terms - Honor Code - FAQs -

A project of



In association with



Funded by



Powered by

analysis; Circuit theorems

Week 6: More circuit theorems; Two port parameters

Week 7: Two port parameters continued; Reciprocity in resistive networks

Week 8: Opamp and negative feedback; Example circuits and additional topics

Week 9 :First Order Circuits

Week 10 : First order circuits with time-varying inputs

Week 11: Second order system response

Week 12: Direct calculation of steady state response from equivalent components

Video Download

No, the answer is incorrect.

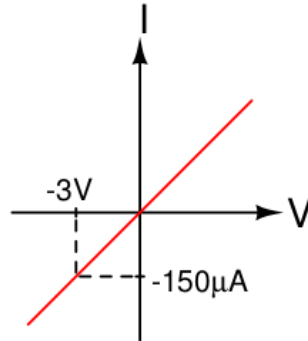
Score: 0

Accepted Answers:

(Type: Numeric) 3

1 point

- 3) A resistor's I-V characteristics are shown in the figure below. Determine its resistance.



(The answer must be in kilohms (kΩ). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

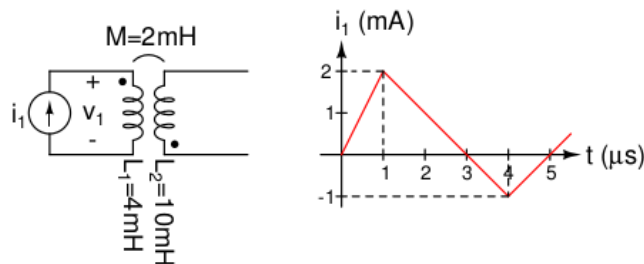
Score: 0

Accepted Answers:

(Type: Numeric) 20

1 point

- 4) In the figure below, determine the voltage v_1 at $t=3\ \mu\text{s}$.
(The waveform consists of straight line segments)



(The answer must be in volts (V). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

Score: 0

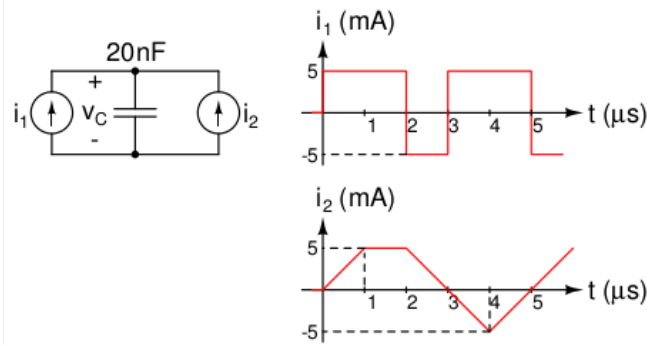
Accepted Answers:

(Type: Numeric) -4

1 point

- 5)

In the figure below, determine the voltage v_c at $t = 6\mu s$. The capacitor is initially discharged (i.e. the capacitor voltage is zero at $t = 0$).
(The waveform consists of straight line segments)



(The answer must be in millivolts (mV). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

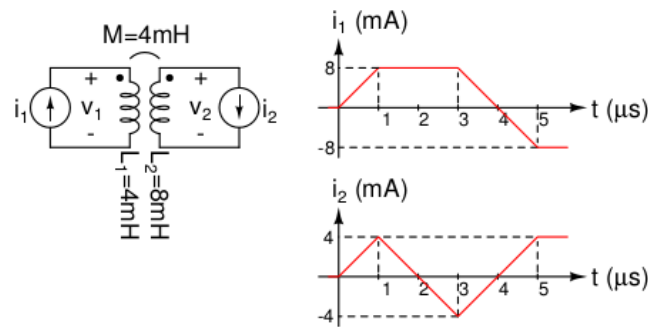
Score: 0

Accepted Answers:

(Type: Numeric) 875

1 point

6) In the figure below, determine the voltage v_2 at $t = 4\mu s$.
(The waveform consists of straight line segments)



(The answer must be in volts (V). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

Score: 0

Accepted Answers:

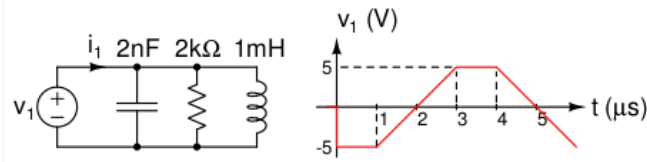
(Type: Numeric) -64

1 point

7)

In the figure below, determine the current i_1 at $t = 5 \mu\text{s}$. The inductor current is zero at $t = 0$.

(The waveform consists of straight line segments)



(The answer must be in **milliamperes (mA)**. Round off fractional answers to one decimal place.)

No, the answer is incorrect.

Score: 0

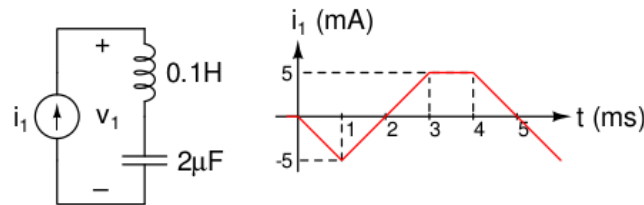
Accepted Answers:

(Type: Numeric) -7.5

1 point

8) In the figure below, determine the voltage v_1 at $t = 5 \text{ ms}$. The capacitor voltage and inductor current are zero at $t = 0$.

(The waveform consists of straight line segments)



(The answer must be in **volts (V)**. Round off fractional answers to one decimal place.)

No, the answer is incorrect.

Score: 0

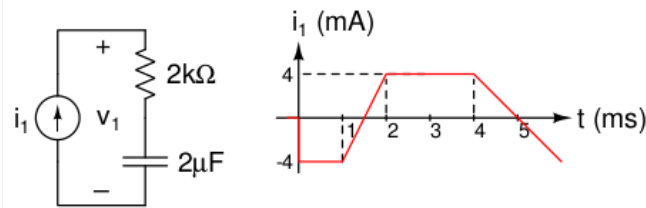
Accepted Answers:

(Type: Numeric) 2

1 point

9)

In the figure below, determine the voltage v_1 at $t = 5$ ms. The capacitor voltage is zero at $t = 0$.
(The waveform consists of straight line segments)



(The answer must be in volts (V). Round off fractional answers to one decimal place.)

No, the answer is incorrect.

Score: 0

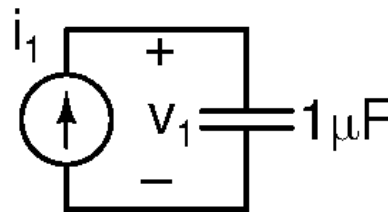
Accepted Answers:

(Type: Numeric) 3

1 point

10)

In the figure below, $i_1 = 1\text{mA}\sin(2\pi \times 10^3 t)$. Determine v_1 at $t = 1$. The capacitor voltage is zero at $t = 0$.



In case your answer is fractional, round it off to one decimal place.
Your answer must be the numerical value of the voltage in volts (V).
(If the answer is 2 V, enter 2
If the answer is -3 V, enter -3
If the answer is 50 mV, enter 0.05 or 5e-2 etc.)

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Numeric) 2

0 points

Previous Page

End

