3/04/25: Exam #2 Review Session (Guided Notes)
(Zoom ID: 865 7158 3488)

Announce: (Exam #2 Review Session, Working Exam #2 from Spring 2024)

- **Homework (Mastering Engineering)**
  - **Homework #7 (Due Tuesday: 3/04/2025)**
  - **Homework #8 (Due Tuesday: 3/18/2025)**
- **Lab #2 (Mesh and Node Analysis, AC Sources, and d'Arsonval Meters):**
  - **Group A: Sections E, F, G, H, N (This Week: 3/03/2025 - 3/07/2025)**
    - **Bring a printed copy of the Lab Data Sheet (page 9 of Lab #2 PDF document)**
    - **Online Students (Group A): Watch Videos Lab2_01 through Lab2_06**
      - **Attend Online Lab Hours (Questions, Help): (See D2L Announcement: Thurs 3-4pm, Sat&Sun 11am-Noon)**
  - **Group B: Sections M, I, L, J, K, O: Lab Report #1 (Due Wednesday: 3/05/2025)**
  - **Group B: Sections M, I, L, J, K, O: Pre-lab #2 (Due Friday: 3/07/2025)**

- **Review Lecture for Exam #2 on Tuesday (3/04/2025)**
- **No Class (Friday, 3/07/2025)**

- **Exam #2: Topics: Chapter 4 and Homework Sets 5, 6, and 7. Practice Exams on D2L (Exam #2 Material)**
  - **Main Campus Students: Thursday (3/06/2025)**
  - **Online Students: Friday - Sunday (3/07/2025 - 3/09/2025)**

- **Spring Break (Next Week: 3/10/2025 - 3/14/2025): No Class Sessions**

- **Textbook Material:**
  - **Reading Chapter Five: Operational Amplifiers**

Goals: (Exam #2 Review Session, Working Exam #2 from Spring 2024)

Question	Percent
5: Question 5 (5.5556 pts)	22.2
3: Question 3 (5.5556 pts)	40.7
9: Question 9 (11.1111 pts)	53.7
6: Question 6 (5.5556 pts)	55.6
4: Question 4 (5.5556 pts)	61.1
10: Question 10 (11.1111 pts)	61.1
1: Question 1 (5.5556 pts)	66.7

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University of Arizona
Department of Electrical & Computer Engineering
ECE 220 Basic Circuits

Examination 2

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4: Question 4 (5.5556 pts)	61.1
10: Question 10 (11.1111 pts)	61.1
1: Question 1 (5.5556 pts)	66.7
7: Question 7 (11.1111 pts)	66.7
12: Question 12 (11.1111 pts)	66.7
8: Question 8 (11.1111 pts)	70.4
11: Question 11 (11.1111 pts)	70.4
2: Question 2 (5.5556 pts)	88.9

Examination 2

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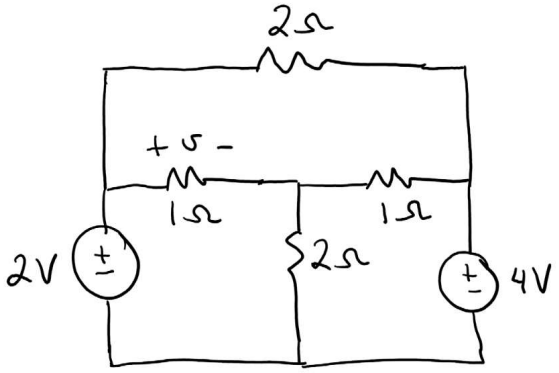
Closed book/notes, calculators allowed up to level of TI89, TI Inspire CAS, or HP50.

Part I: 6 questions
Part II: 6 questions
Part II questions are worth twice as much as Part I questions.

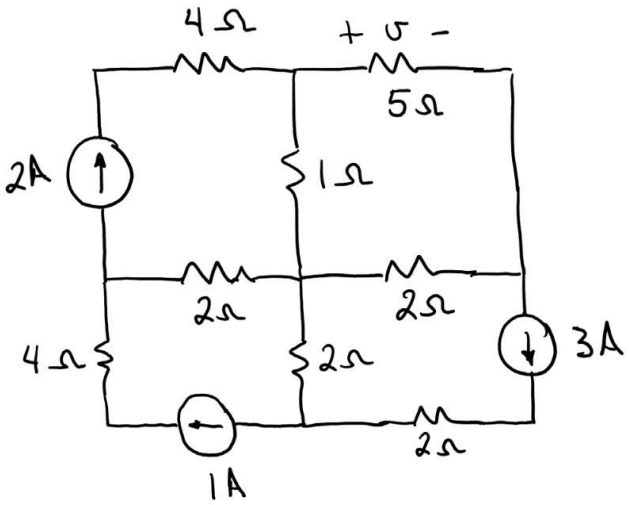
1. Find v.



a) 0.40 V
b) – 0.40 V
c) 2.40 V
d) -1.00 V
e) none of these

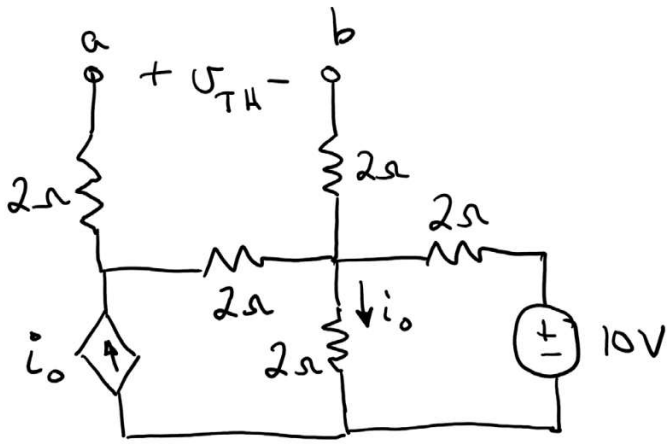
2. Find v.

a) 1.25 V
b) 1.0 V
c) 4.25 V
d) 5.00 V
e) none of these



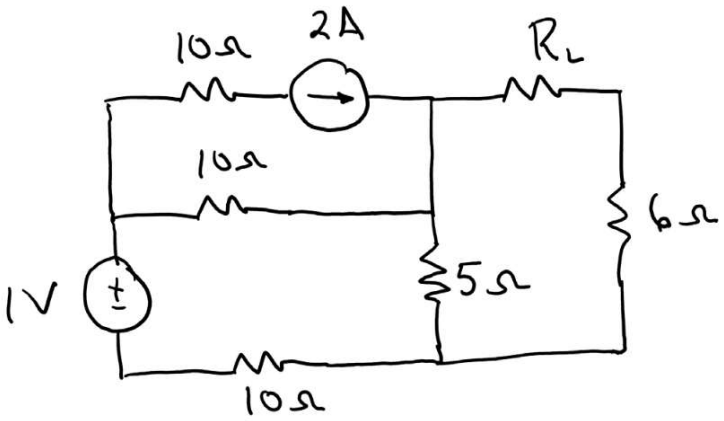
3. What is v_{TH} for the following circuit with respect to the terminals a and b?

a) 10 V
b) 5 V
c) 0 V
d) -10 V
none of these



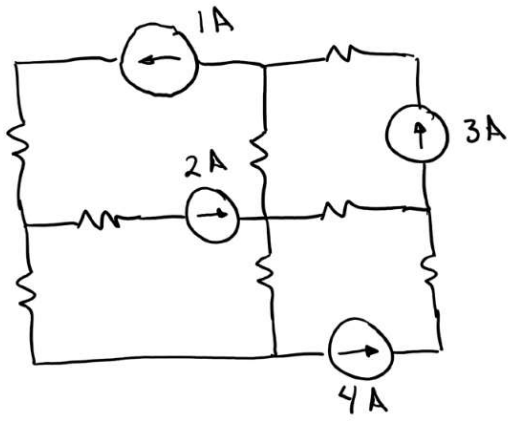
4. What value of R_L yields the maximum possible power being absorbed by R_L ?

a) 16.0 Ω
b) 11.0 Ω
c) 8.50 Ω
d) 10.0 Ω
e) none of these



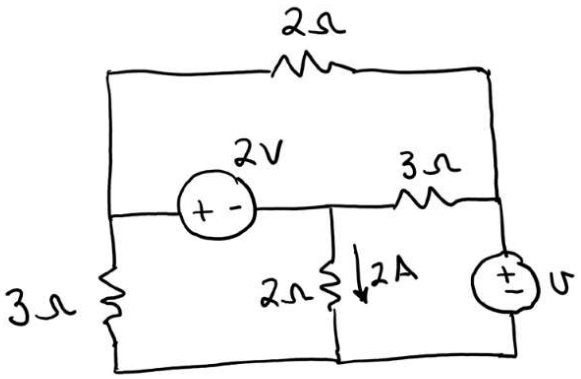
5. How many supermesh equations would be needed to find the mesh currents in this circuit?

a) 2 supermeshes
b) 1 supermesh
c) 0 supermeshes
d) 3 supermeshes
e) none of these



6. Find v .

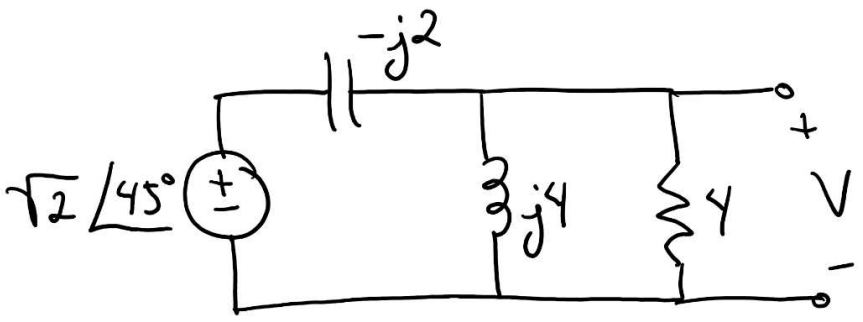
a) 4.0 V
b) 10.0 V
c) 2.0 V
d) 6.0 V
e) none of these



Part II.

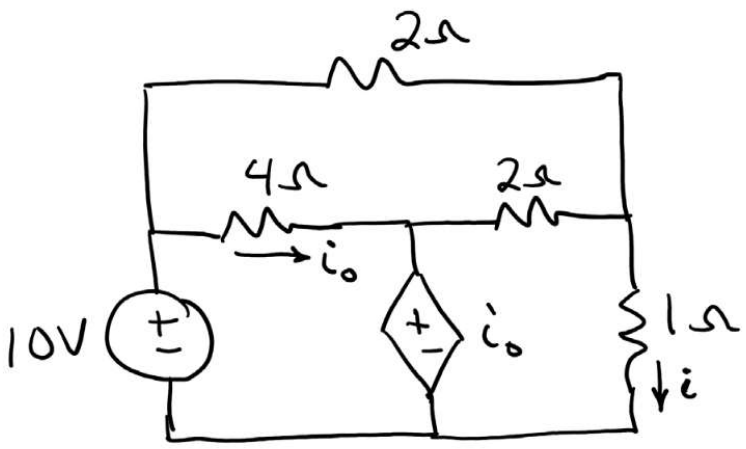
7. Find the complex phasor current ***V***.

a) $2.0\angle -90.0°$ A
b) $2.0\angle 90.0°$ A
c) $\left(\frac{1}{\sqrt{2}}\right)\angle 0.0°$ A
d) $2.0\angle 0.0°$ A
e) none of these



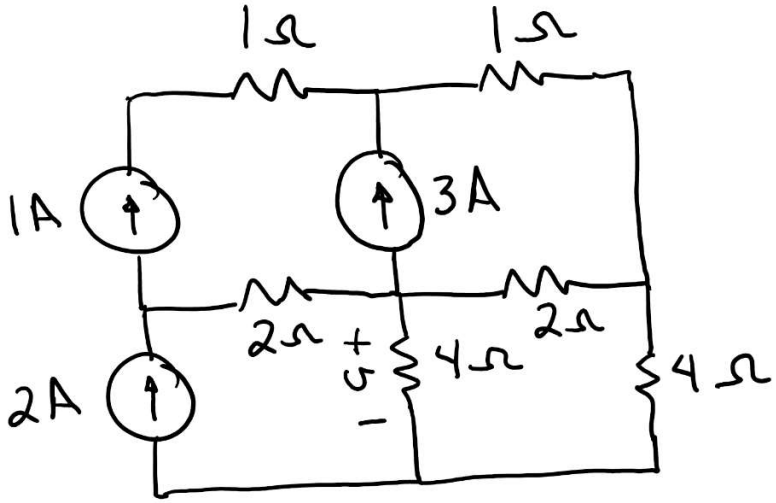
8. Find i .

a) 2.00 A
b) 5.00 A
c) 3.00 A
d) 3.50 A
e) none of these

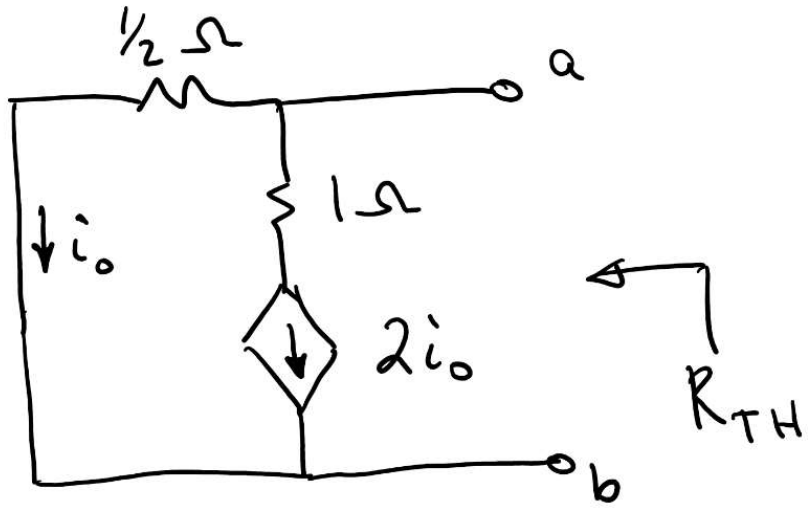


9. Find v.

a) - 6.40 V
b) 8.00 V
c) 4.00 V
d) 1.60 V
e) none of these



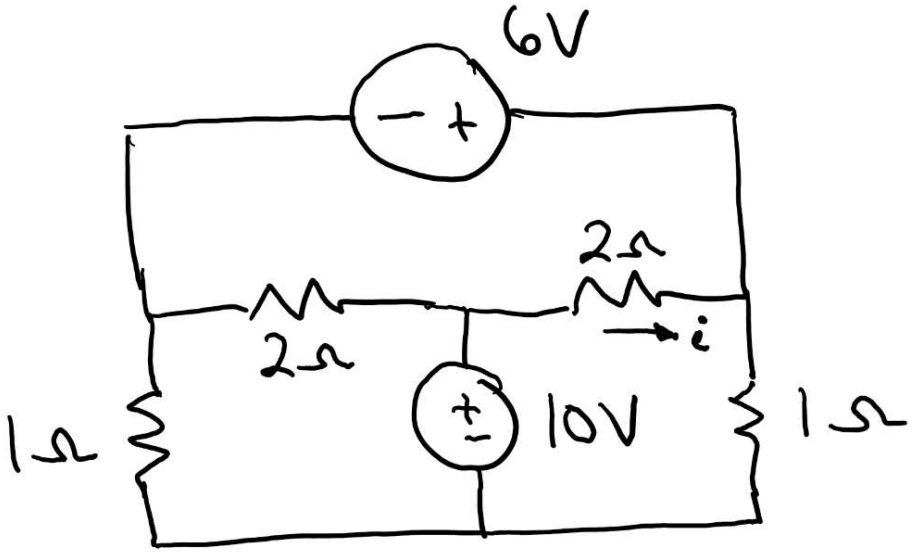
10. Find R_{TH} with respect to *a* and *b*.



a) 0.17 Ω
b) 0.50 Ω
c) 2.00 Ω
d) 6.00 Ω
e) none of these

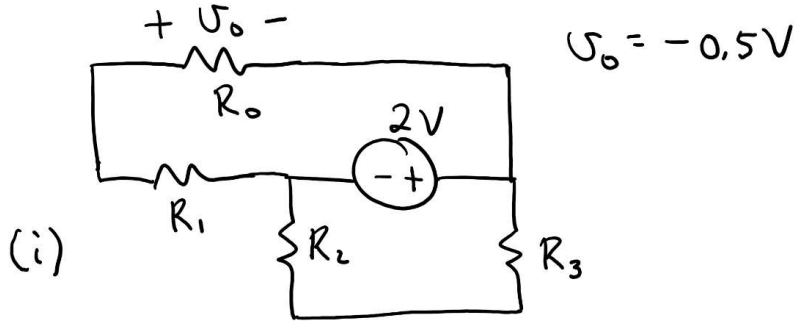
11. Find i .

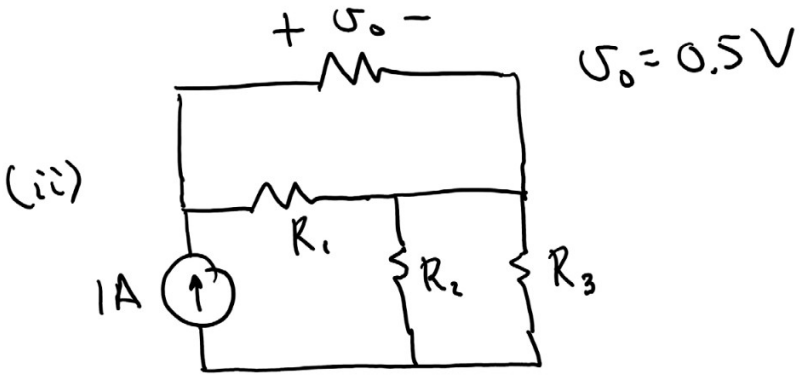
a) 0.33 A
b) 1.00 A
c) 1.83 A
d) 2.00 A
e) none of these



12. Given circuits (i) and (ii), find v_o in circuit (iii).

a) 0.75 V
b) 0.50 V
c) 0.00 V
d) - 0.25 V
e) none of these





(iii)