

ENEL 280 Mid Term Exam 1
Summer 2001

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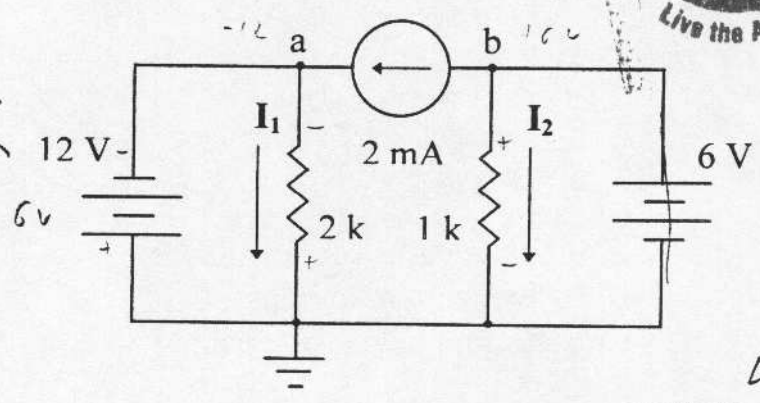
Circle the correct answers.

1. I_1 is:

- a) 2 mA
- b) -2 mA
- c) 4 mA
- d) -4 mA
- e) 6 mA
- f) -6 mA

2. I_2 is:

- a) 2 mA
- b) -2 mA
- c) 4 mA
- d) -4 mA
- e) 6 mA
- f) -6 mA



3. V_{ab} is: a) 6 V b) -6 V c) 12 V d) -12 V e) 18 V f) -18 V

$V_{ab} = V_a - V_b$
 $= -12 - 6 = -18V$

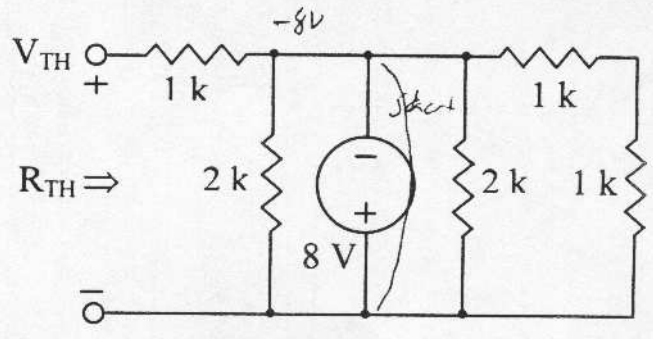
4. V_{TH} is:

- a) 1 V
- b) -1 V
- c) 4 V
- d) -4 V
- e) 8 V
- f) -8 V

5. R_{TH} is:

- a) 1/2 k
- b) 1 k
- c) 2 k
- d) 3/2 k
- e) 5/3 k

Should be $\frac{2}{3} k$



$\frac{1}{2} + \frac{2}{2} = \frac{3}{2} = \frac{2}{3} k$

6. $I_1 = -4 mA$

$I_1 = \frac{-4V}{1k}$

7. $I_2 = -\frac{2}{3} mA$

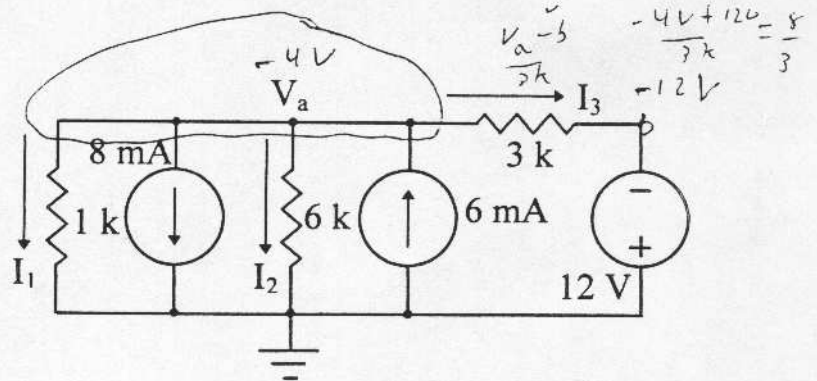
$I_2 = \frac{-4V}{6k}$

8. $I_3 = -1.33 mA$

$\frac{8}{3} mA$

9. $V_a = 2.66 V$

$-4V$
 $6 \downarrow$



$\frac{-4V + 12V}{3k} = \frac{8}{3}$
 $-12V$

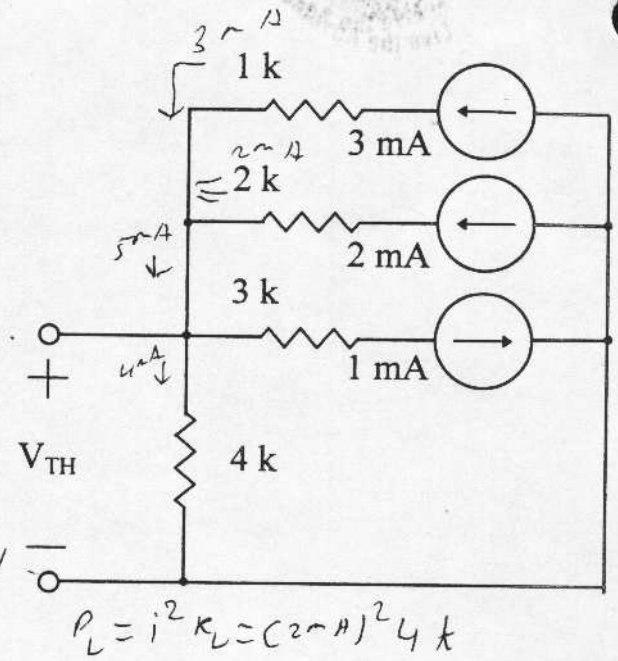
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10. V_{TH} is:

- a) 4 V
- b) 8 V
- c) 16 V ✓
- d) 24 V

11. Find the value of a load resistor, R_L , which would transfer maximum power, P_L , from this circuit. $R_L = 4k$ ✓ $= R_{eq}$

12. Calculate that power. $P_L = \frac{v_L^2}{R_L} = 10W$ ✓ $= 3mW$

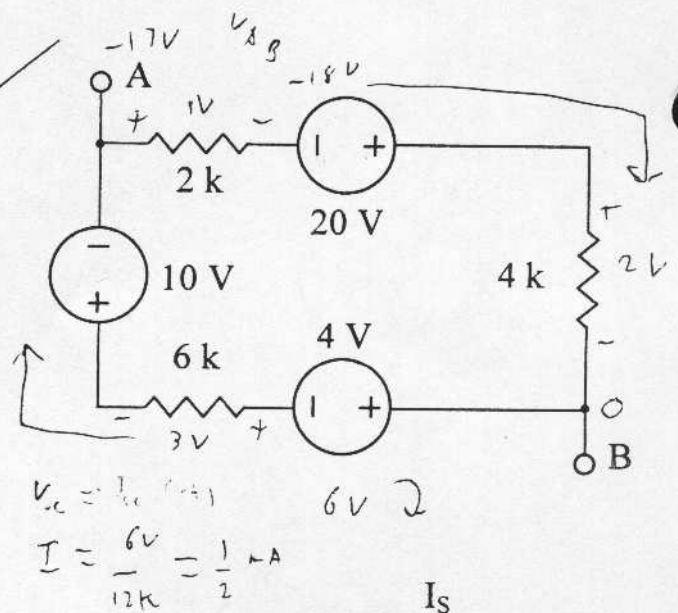


? 13. V_{TH} is: V_{AB}

- a) 3 V
- b) -27 V
- c) 27 V
- d) -31 V
- e) 31 V
- f) -17 V ✓
- g) 17 V

14. R_{AB} is:

- a) 3k ✓
- b) 8/3 k
- c) 5/3 k
- d) 12k



15. V_O is:

- a) undefined
- b) 5 V ✓
- c) -5 V

16. I_S is:

- a) undefined
- b) 5 mA
- c) -5 mA ✓

