Assignment 6

Due on 2020-10-28, 23:59 IST.

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

1) Determine the voltage \( V_{th} \) in the circuit above.

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

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 1.15,1.35

2) Determine the resistance \( R_{th} \) in the circuit above.

(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: Range) 7.8,8.2

3) Determine the voltage \( V_{th} \) in the circuit above.

(The answer must be in volts (V). Round off fractional answers to one decimal place.)
4) A positive resistance $R_L$ is connected to the circuit above at $I-I'$. What should be the value of $R_L$ such that the maximum possible power is dissipated in it?

(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: Range) -4.2,-3.8

5) Determine the current $I_N$ in the circuit above.

(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: Range) 0.6,0.8

6) Determine the Norton equivalent resistance $R_N$ in the circuit above.

(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: Range) 4.9,5.1

7) Determine the current $I_N$ in the circuit above.

(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: Range) -15.5,-14.5
8) A positive resistance $R_L$ is connected to the circuit above at 1-$1'$. What should be the value of $R_L$ such that the maximum possible power is dissipated in it?

(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: Range) 7.8, 8.2

9) Determine the y parameters of the circuit above. $y_{i,j}$'s are the numerical values of the y-parameters in millisiemens (mS).

e.g. For the matrix: $\begin{bmatrix} 2 \text{ mS} & 1 \text{ mS} \\ -1 \text{ mS} & 0 \end{bmatrix}$,

$y_{11} = 2; y_{12} = 1; y_{21} = -1; y_{22} = 0$;

$y_{12} \times y_{21} = -1$

The answer is the value of the expression given below:

$y_{11} + y_{12} + (y_{21} \times y_{22})$

(Round off fractional answers to one decimal place.)

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) -32.5, -31.5

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e.g. For the matrix: \[
\begin{bmatrix}
2 \text{ mS} & 1 \text{ mS} \\
-1 \text{ mS} & 0
\end{bmatrix},
\]

$y_{11} = 2; y_{12} = 1; y_{21} = -1; y_{22} = 0; y_{12} \times y_{21} = -1$

The answer is the value of the expression given below:

\[y_{12} + y_{21} + (y_{11} \times y_{22})\]

(Round off fractional answers to one decimal place.)