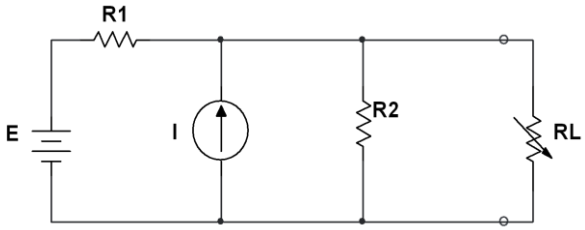
**PRACTICA CALIFICADA – CUARTO BIMESTRE**

**TEOREMAS DE REDES – TRANSFERENCIA DE MAXIMA POTENCIA**

| | |
|---|---|
| NOMBRES Y APELLIDOS | |
| GRADO Y SECCIÓN | |

1. Simule el siguiente circuito donde RL es una resistencia variable de 0 a 10KΩ; donde se solicita hallar $V_{RL}$ e $I_{RL}$ cuando:




**RL =**

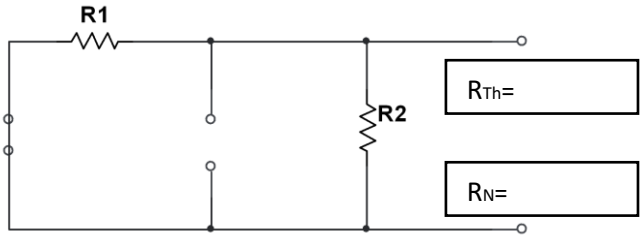
$V_{RL}$ = ____ $I_{RL}$= ____

**RL =**

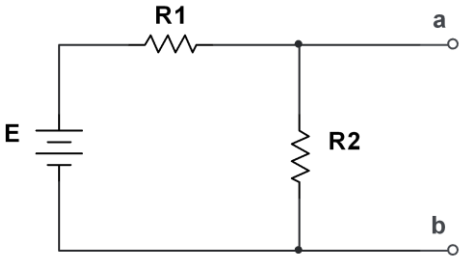
$V_{RL}$ = ____ $I_{RL}$= ____

Utilizando el simulador KTECHLAB determine el equivalente NORTON Y THEVENIN del circuito anterior:

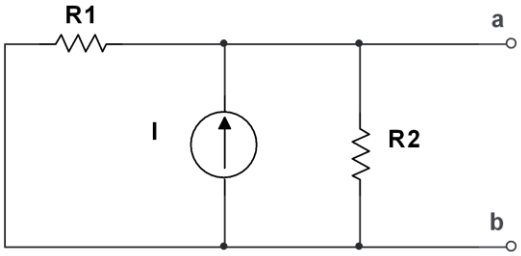
a) En el siguiente circuito hallamos $R_N$




b) Utilizando el metodo de superposicion hallamos $I_N$.

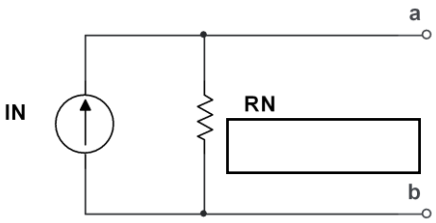


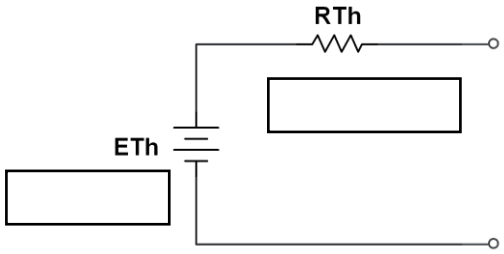

$I_{N1}$ = ____



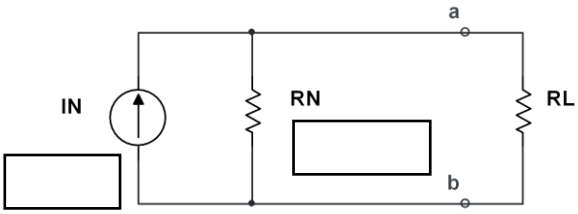

$I_{N2}$ = ____

**Resumen:** Equivalente Norton y Thevenin:

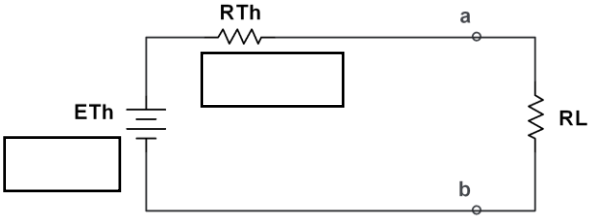



**Calculo de RL:**

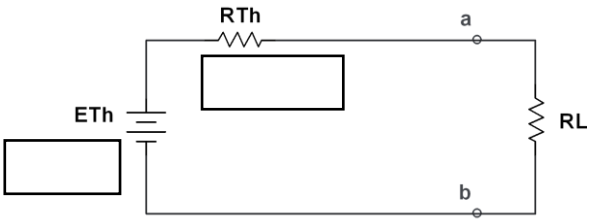



$V_{RL}$ = ____ $I_{RL}$= ____




$V_{RL}$ = ____ $I_{RL}$= ____

**Graficas de Transferencia de Máxima Potencia:**




Para que exista Transferencia de Máxima Potencia debe cumplir que:

RL = RTh=

**Tabla de Valores (Hoja de Cálculo):**

| ETh | RTh | RL | VL | IL | PL |
|---|---|---|---|---|---|
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**Grafica RL vs VL:**

**Grafica RL vs IL:**

**Grafica RL vs PL:**

**TABLA DE VALORES:**

$N_1$ $A_1$ $N_2$ $A_2$
R1 R2 E I

| NOMBRES Y APELLIDOS | | | | R1 | R2 | E | I |
|---|---|---|---|---|---|---|---|
| A | T | M | Q | 3.4 | 8.1 | 20 | 3.2 |
| B | U | LL | R | 4.5 | 7.5 | 30 | 2.5 |
| C | V | L | S | 5.6 | 8.9 | 15 | 3.7 |
| D | W | K | N | 2.7 | 9.7 | 28 | 3.8 |
| E | X | J | Ñ | 3.8 | 7.9 | 35 | 4.1 |
| F | Y | I | O | 4.7 | 9.4 | 18 | 5.3 |
| G | Z | H | P | 6.1 | 8.2 | 24 | 4.2 |