Universidad Tecnológica de Torreón

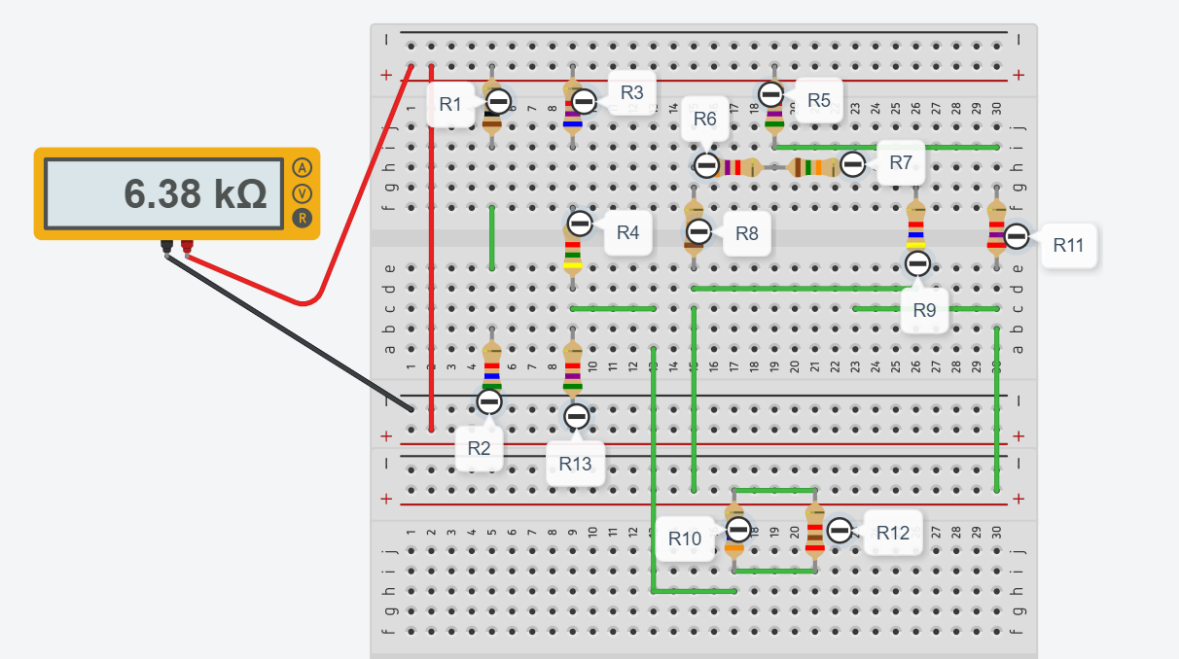
PRINCIPIOS PARA IOT

Ing. DAVID OCHOA DEL TORO
TDSM – 4”B”

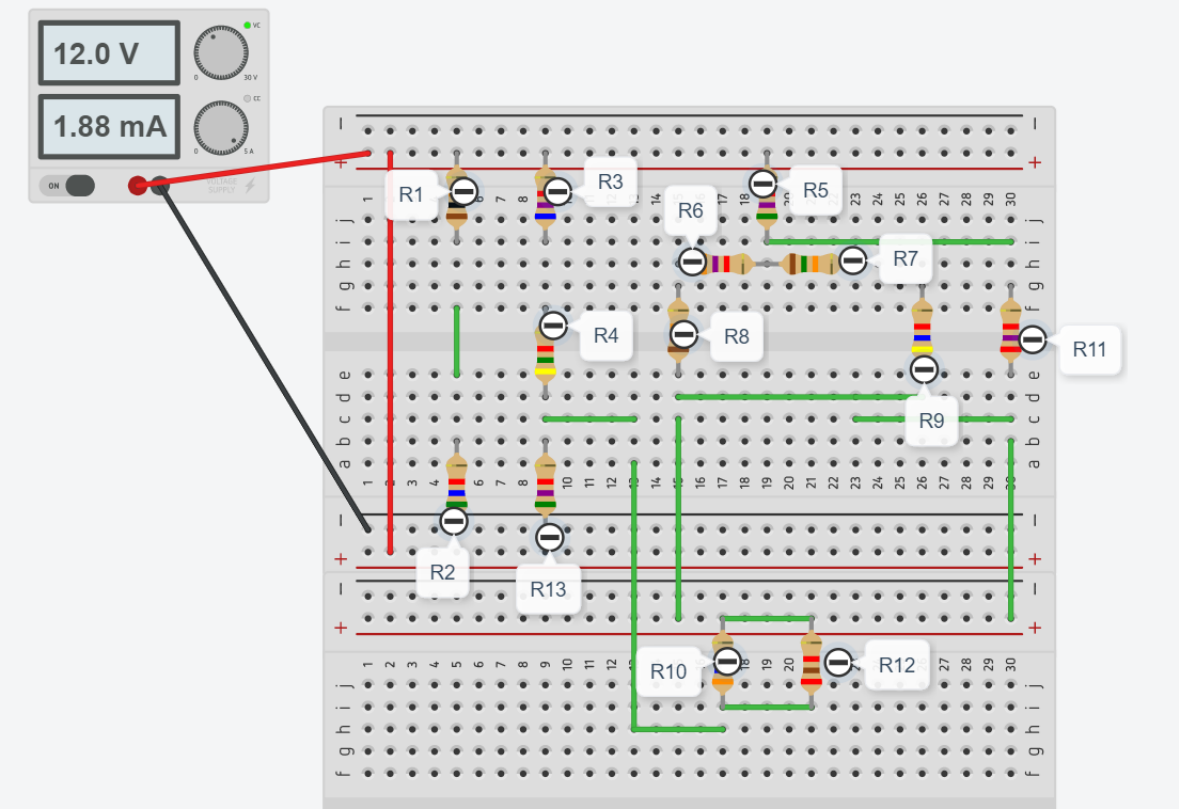
Lucero Alhely Barraza Cedillo

Circuito 2
Tinkercad

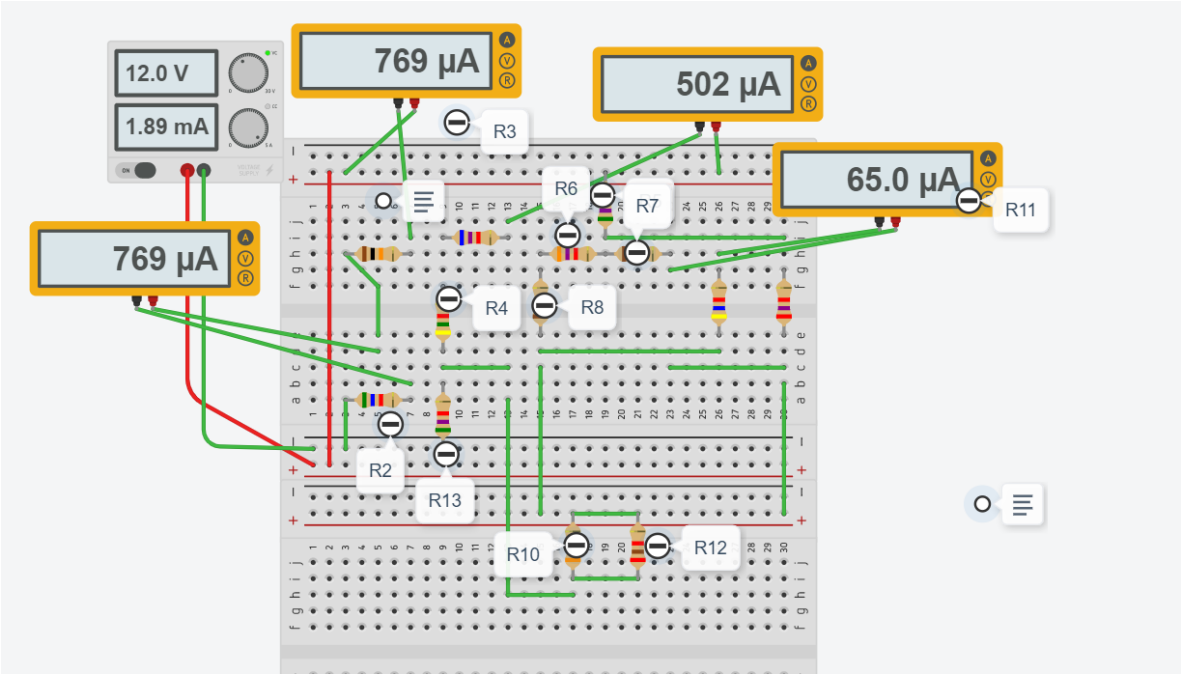
Primer imagen únicamente con la resistencia total del Circuito 2



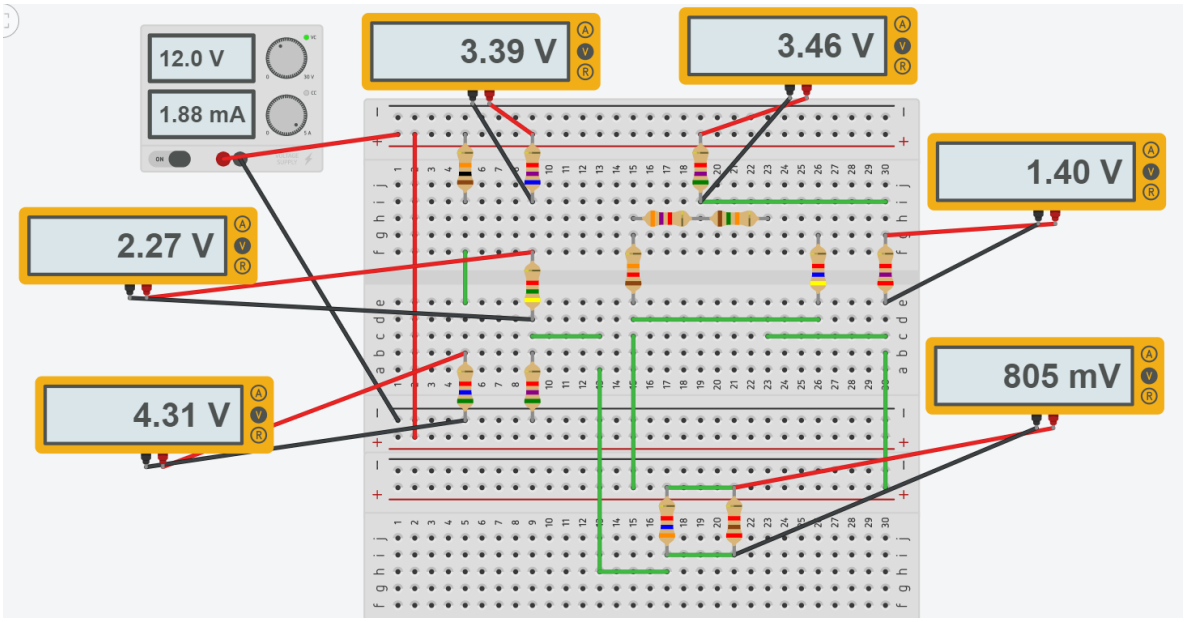
Segunda imagen aplicando el suministro de energía a 12 V para que muestre la corriente total

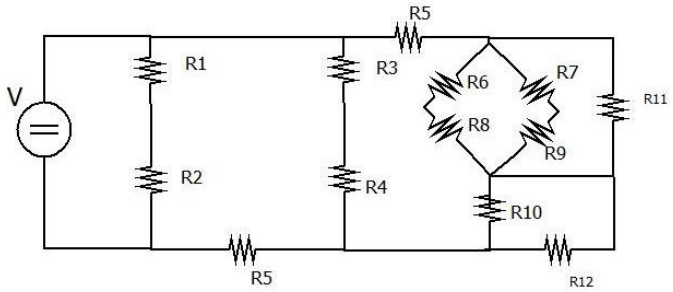


Aquí se muestra Corriente Total y corrientes del circuito



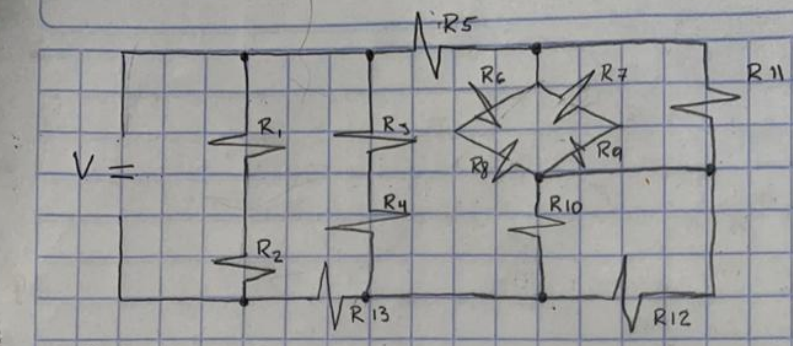
Cuarta imagen con 6 voltajes de las resistencias





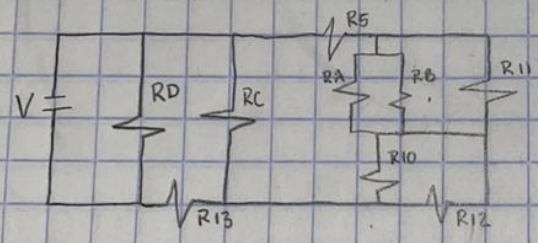
No Resistencia	R	I	V
1	10K	0.7692	7.643
2	5.6K	0.7692	4.357
3	6.7K	1.0714	3.1017
4	4.5K	1.0714	4.2983
5	5.7K	0.9024	3.144
6	3.7K	0.7643	2.8279
7	15K	0.6122	3.183
8	12K	0.7643	2.1716
9	4.6K	0.6122	2.817
10	3.6K	3.3333	0.5362
11	2.7K	4.4444	1.9429
12	2.1K	5.7142	0.8949
13	5.7K	2.1052	3.4899
Total	**6.3572K**	**1.8876A**	**12V**

SERIE



RESISTENCIA	
1	10 K
2	5.6 K
3	6.7 K
4	4.5 K
5	5.7 K
6	3.7 K
7	15 K
8	12 K
9	4.6 K
10	3.6 K
11	2.7 K
12	2.1 K
13	5.7 K

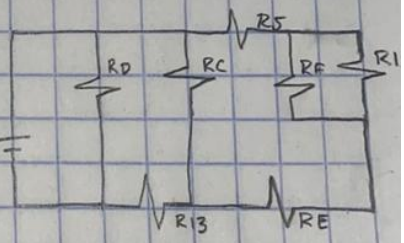
$RA = R6 + R8 = 15.7\ K$
$RB = R7 + R9 = 19.6\ K$
$RC = R3 + R4 = 11.2\ K$
$RD = R1 + R2 = 15.6\ K$

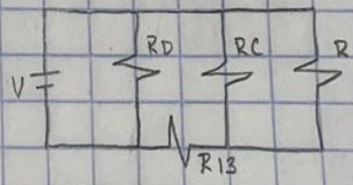


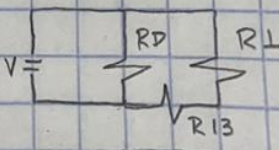
$RE = 1/(1/R10 + 1/R12) = 1.3266\ K$
$RF = 1/(1/RA + 1/RB) = 8.7260\ K$

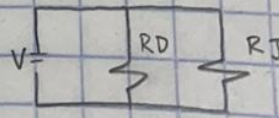
$RG = 1/(1/RF + 1/R11) = 2.0622\ K$
$RH = R5 + RG + RE = 9.0888\ K$

$RI = 1/(1/RC + 1/RH) = 5.0200\ K$
$RJ = RI + R13 = 10.72\ K$
$RT = 1/(1/RD + 1/RJ) = 6.3572$









$I_T = V_T / R_T$

$I_T = 12 / 6.3572$

$I_T = 1.8876$

$I_A = 12 / 15.7 = 0.7643$

$I_B = 12 / 19.6 = 0.6122$

$I_C = 12 / 11.2 = 1.0714$

$I_D = 12 / 15.6 = 0.7692$

$I_5 = 5.144 / 5.7 = 0.9024$

$V_1 = R_1 * I_1 = 7.643$

$V_2 = 12 - 7.643 = 4.357$

$V_3 = R_3 * I_B = 4.1017$

$V_4 = R_4 * I_B = 2.7549$

$V_5 = 12 - 4.1017 - 2.7543 = 5.144$

$V_6 = R_6 * I_A = 2.8279$

$V_7 = R_7 * I_B = 9.183$

$V_8 = R_8 * I_A = 9.1716$

$V_9 = 12 - 9.183 = 2.817$