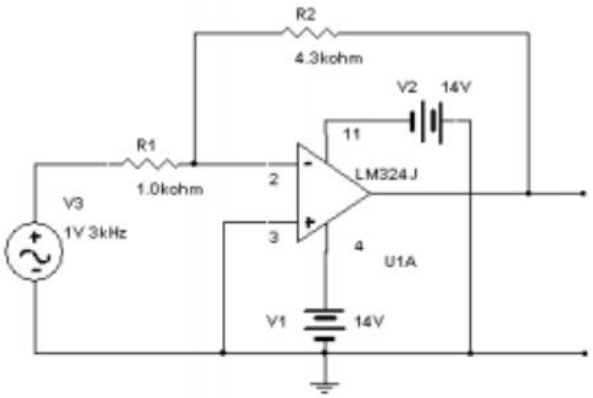
Cálculos

Calcular el voltaje de salida en un lazo cerrado operacional en cada uno de los siguientes circuitos.

Circuito 1



$$V_{out} = -(\frac{R_f}{R_i})V_{in}$$

$$V_{in} = 1$$

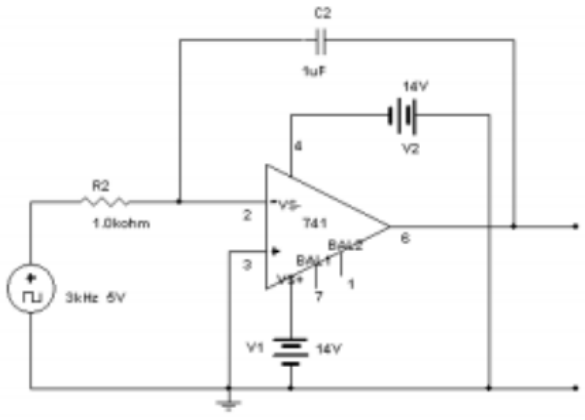
$$R_i = 1000\Omega$$

$$R_f = 4300\Omega$$

$$V_{out} = -(\frac{4300}{1000})1$$

$$V_{out} = -4{,}3\ [V]$$

Circuito 2



$$V_{out} = -(\frac{R_f}{R_i})V_{in}$$

$$V_{in} = 1$$

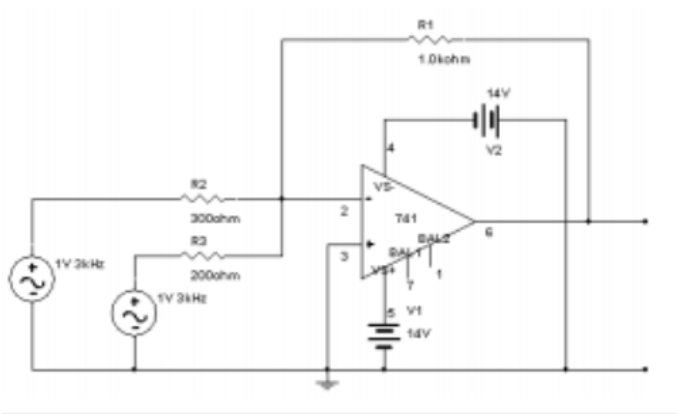
$$Z_i = 1000\Omega$$

$$Z_f = -j53{,}05\Omega$$

$$V_{out} = -\frac{j53{,}05}{1000} * 5$$

$$Vout = -0{,}26[V]$$

Circuito 3



$$V_{out} = -(\frac{R_f}{R_i})V_{in}$$

$$V_{in1} = 1$$

$$V_{in2} = 1$$

$$R_{i1} = 300\Omega$$

$$R_{i2} = 200\Omega$$

$$V_{out} = -R_f(\frac{V_{in1}}{R_{i1}} + \frac{V_{in2}}{R_{i2}})$$

$$V_{out} = -R_f(\frac{V_{in1}}{R_{i1}} + \frac{V_{in2}}{R_{i2}})$$

$$V_{out} = -8{,}333\ [V]$$