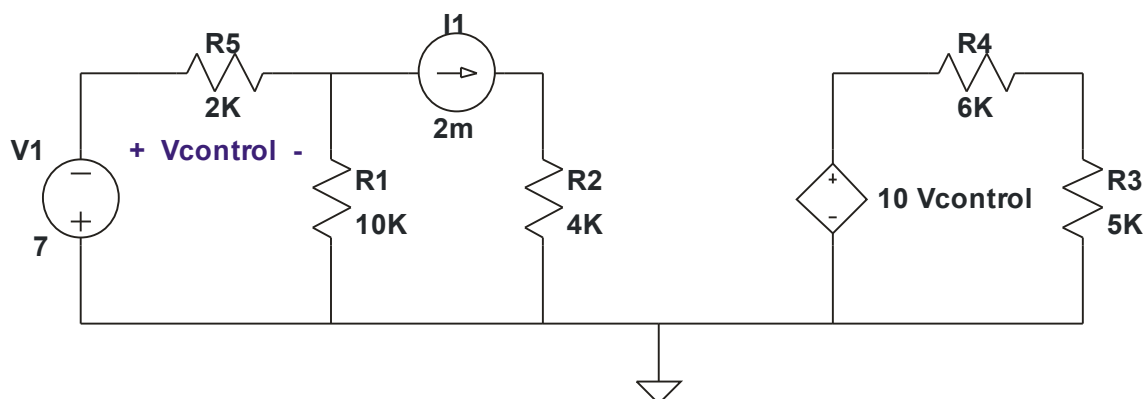
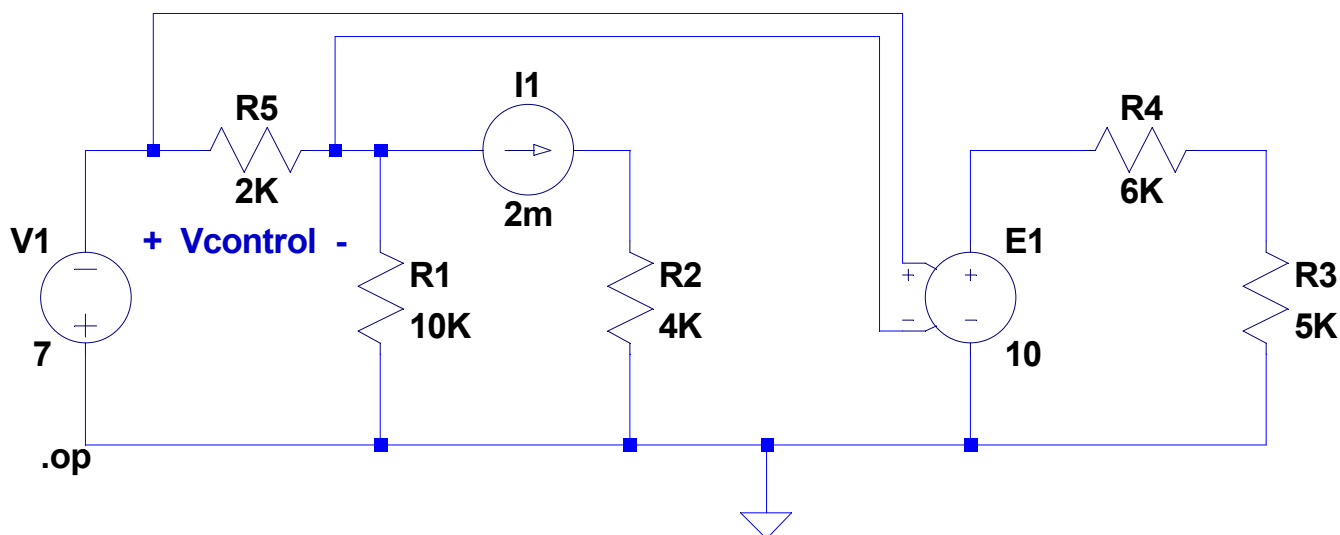


A.1. Fuente dependiente de Tensión Controlada por Tensión (Fuente 'E')



Circuito Spice



NETLIST

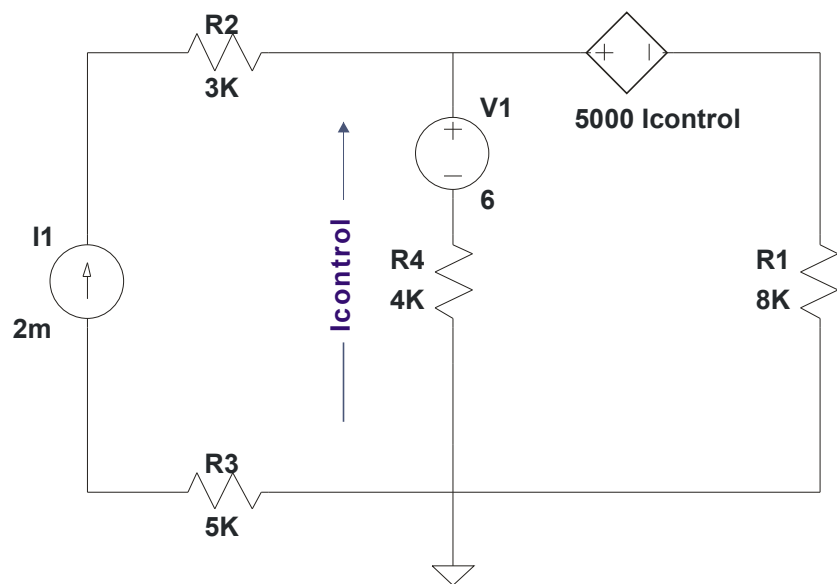
```
R1 N002 0 10K
R2 N003 0 4K
R3 N005 0 5K
R4 N005 N004 6K
I1 N002 N003 2m
R5 N002 N001 2K
E1 N004 0 N001 N002 10
V1 0 N001 7
.op
.backanno
.end
```

PUNTO DE OPERACIÓN

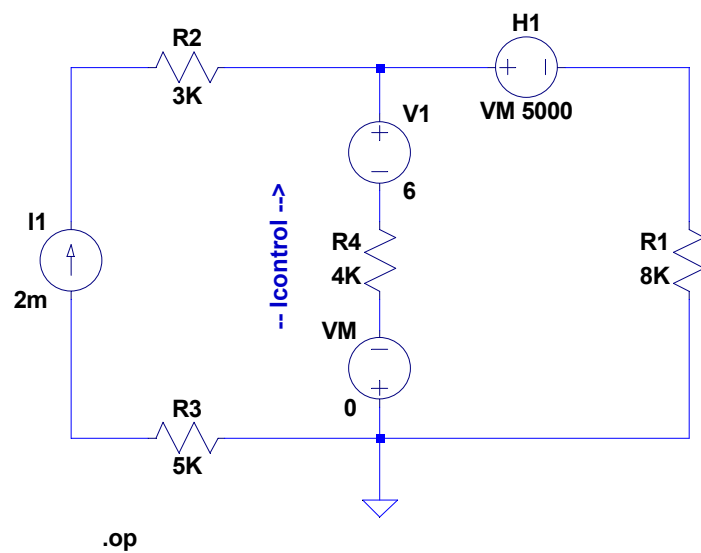
--- Operating Point ---

V(n002):	-9.16667	voltage
V(n003):	8	voltage
V(n005):	9.84848	voltage
V(n004):	21.6667	voltage
V(n001):	-7	voltage
I(I1):	0.002	device_current
I(R5):	-0.00108333	device_current
I(R4):	-0.0019697	device_current
I(R3):	0.0019697	device_current
I(R2):	0.002	device_current
I(R1):	-0.000916667	device_current
I(E1):	-0.0019697	device_current
I(V1):	0.00108333	device_current

A.2. Fuente dependiente de Tensión Controlada por Intensidad (Fuente 'H')



Circuito Spice

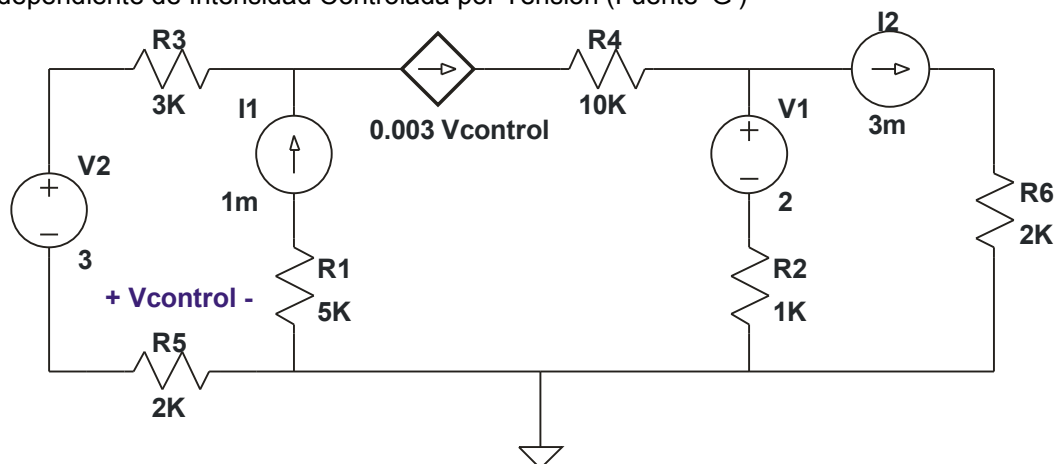


```
NETLIST

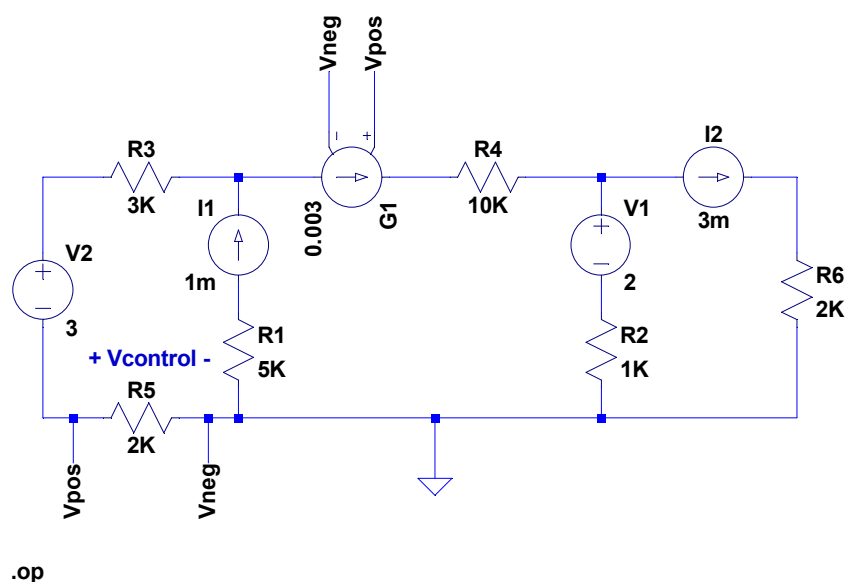
I1 N006 N001 2m
R2 N002 N001 3K
R3 0 N006 5K
R4 N005 N004 4K
R1 0 N003 8K
VM 0 N005 0
V1 N002 N004 6
H1 N002 N003 VM 5000
.op
.backanno
.end
```

PUNTO DE OPERACIÓN		
--- Operating Point ---		
V(n006):	-10	voltage
V(n001):	14.3529	voltage
V(n002):	8.35294	voltage
V(n005):	0	voltage
V(n004):	2.35294	voltage
V(n003):	11.2941	voltage
I(H1):	0.00141176	device_current
I(I1):	0.002	device_current
I(R1):	-0.00141176	device_current
I(R4):	-0.000588235	device_current
I(R3):	0.002	device_current
I(R2):	-0.002	device_current
I(V1):	0.000588235	device_current
I(Vm):	-0.000588235	device_current

A.3. Fuente dependiente de Intensidad Controlada por Tensión (Fuente 'G')



Circuito Spice



.op

NETLIST

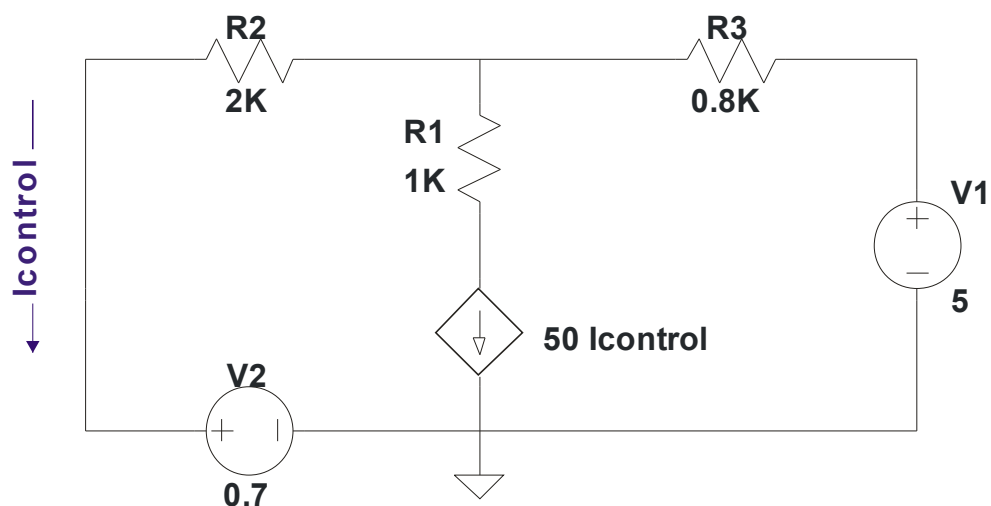
```
V2 N001 Vpos 3
V1 N004 N007 2
I1 N006 N002 1m
I2 N004 N005 3m
R1 N006 0 5K
R2 N007 0 1K
R3 N002 N001 3K
R4 N004 N003 10K
R5 0 Vpos 2K
R6 N005 0 2K
G1 N002 N003 Vpos 0 0.003
.op
.backanno
.end
```

PUNTO DE OPERACIÓN

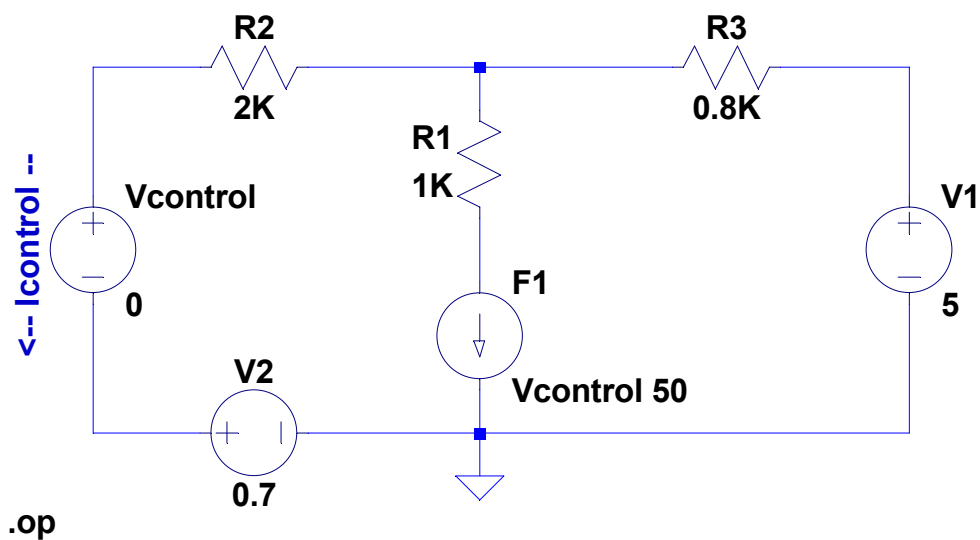
--- Operating Point ---

V(n001):	3.28571	voltage
V(vpos):	0.285714	voltage
V(n004):	-0.142857	voltage
V(n007):	-2.14286	voltage
V(n006):	-5	voltage
V(n002):	3.71429	voltage
V(n005):	6	voltage
V(n003):	8.42857	voltage
I(I2):	0.003	device_current
I(I1):	0.001	device_current
I(R6):	0.003	device_current
I(R5):	-0.000142857	device_current
I(R4):	-0.000857143	device_current
I(R3):	0.000142857	device_current
I(R2):	-0.00214286	device_current
I(R1):	-0.001	device_current
I(G1):	0.000857143	device_current
I(V1):	-0.00214286	device_current
I(V2):	0.000142857	device_current

A.4. Fuente dependiente de Intensidad Controlada por Intensidad (Fuente 'F')



Circuito Spice



NETLIST

```
R2 N002 N001 2K
R3 N003 N002 0.8K
R1 N004 N002 1K
V1 N003 0 5
V2 N005 0 0.7
F1 N004 0 Vcontrol 50
Vcontrol N001 N005 0
.op
.backanno
.end
```

PUNTO DE OPERACIÓN

--- Operating Point ---

V(n002):	0.900935	voltage
V(n001):	0.7	voltage
V(n003):	5	voltage
V(n004):	-4.12243	voltage
V(n005):	0.7	voltage
I(F1):	0.00502336	device_current
I(R1):	-0.00502336	device_current
I(R3):	0.00512383	device_current
I(R2):	0.000100467	device_current
I(Vcontrol):	0.000100467	device_current
I(V2):	0.000100467	device_current
I(V1):	-0.00512383	device_current