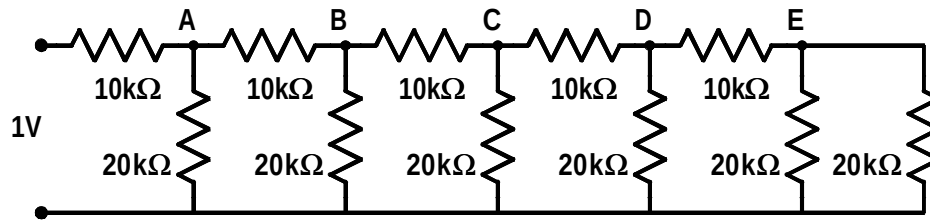


- Node 0 is taken to be ground.
  - Resistor labels begin with R.
  - Capacitor labels begin with C.
  - Inductor labels begin with L.
  - Silicon transistor labels begin with Q.
  - Voltage sources begin with V.
  - Current sources begin with I.
  - Subcircuit labels begin with X.
-

- .DC analysis applies a swept DC to the named node.
  - .AC analysis applies a frequency swept AC to the named node.
  - .TF calculates the transfer function and Thévenin equivalent.
  - .TRAN analyzes the transient behaviour over the stated time.
  - .PROBE prepares an output file suitable for graphing.
  - .END marks the end of the program.
-



R-2R Ladder Unit 5 Example 5.2.

```
vin 1 0 1
```

```
r1a 1 2 10k
```

```
r2a 2 0 20k
```

```
r1b 2 3 10k
```

```
r2b 3 0 20k
```

```
r1c 3 4 10k
```

```
r2c 4 0 20k
```

```
r1d 4 5 10k
```

```
r2d 5 0 20k
```

```
r1e 5 6 10k
```

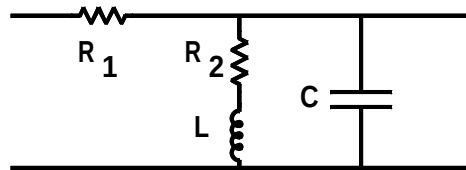
```
r2e 6 0 10k
```

```
.op
```

```
.print dc v(1) v(2) v(3) v(4) v(5) v(6)
```

```
.end
```

---



Unit 17 Example 17.1 Band pass filter

```
vin 1 0 ac 1V
```

```
r1 1 2 1000
```

```
r2 2 3 10
```

```
L1 3 0 1mH
```

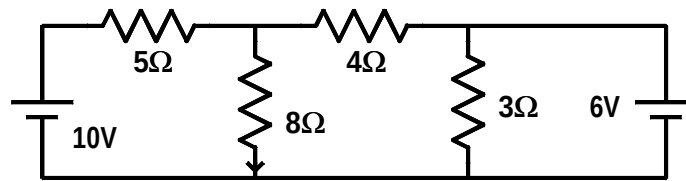
```
c1 2 0 0.21uF
```

```
.ac dec 20 1kHz 100kHz
```

```
.probe v(2)
```

```
.end
```

---



Unit 21 Example 21.1 Principle of superposition.

Unit 21 Example 21.1 Principle of superposition

```
va 1 0 10V
```

```
vb 3 0 6V
```

```
r1 1 2 5
```

```
r2 2 0 8
```

```
r3 2 3 4
```

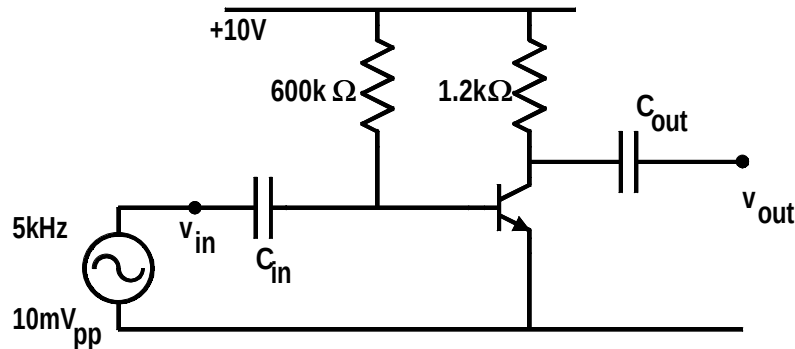
```
r4 3 0 3
```

```
.op
```

```
.print dc v(2) v(3)
```

```
.end
```

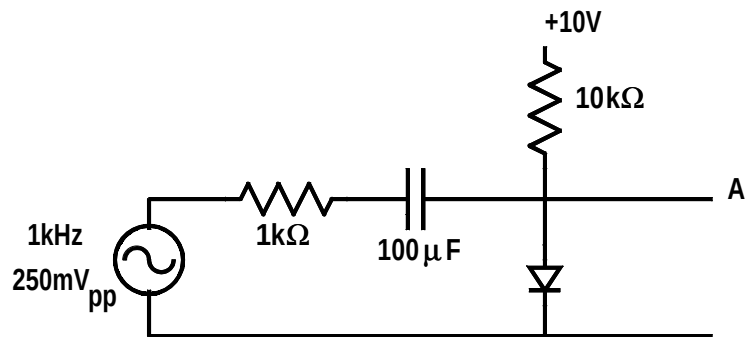
---



## Unit 33 Example 33.1 Transistor amplifier

```
vcc 1 0 10V
vin 2 0 sin ( 0 5mV 5kHz)
c1 2 3 100uF
r2 1 3 600k
q1 4 3 0 qbc107
r3 1 4 1.2k
c2 4 5 100uF
rload 5 0 1000k
.tran 5us 2ms
.probe
.model qbc107 npn (bf=200)
.end
```

---



Unit 27 Example 27.2 Diode attenuator

```
vin 1 0 sin ( 0 125mV 1kHz)
```

```
r1 1 2 1k
```

```
c1 2 3 100uF
```

```
d1 3 0 d1N4148
```

```
r2 4 3 10k
```

```
vdc 4 0 10V
```

```
.lib eval.lib
```

```
.tran 10us 5ms
```

```
.probe v(3)
```

```
.end
```

---