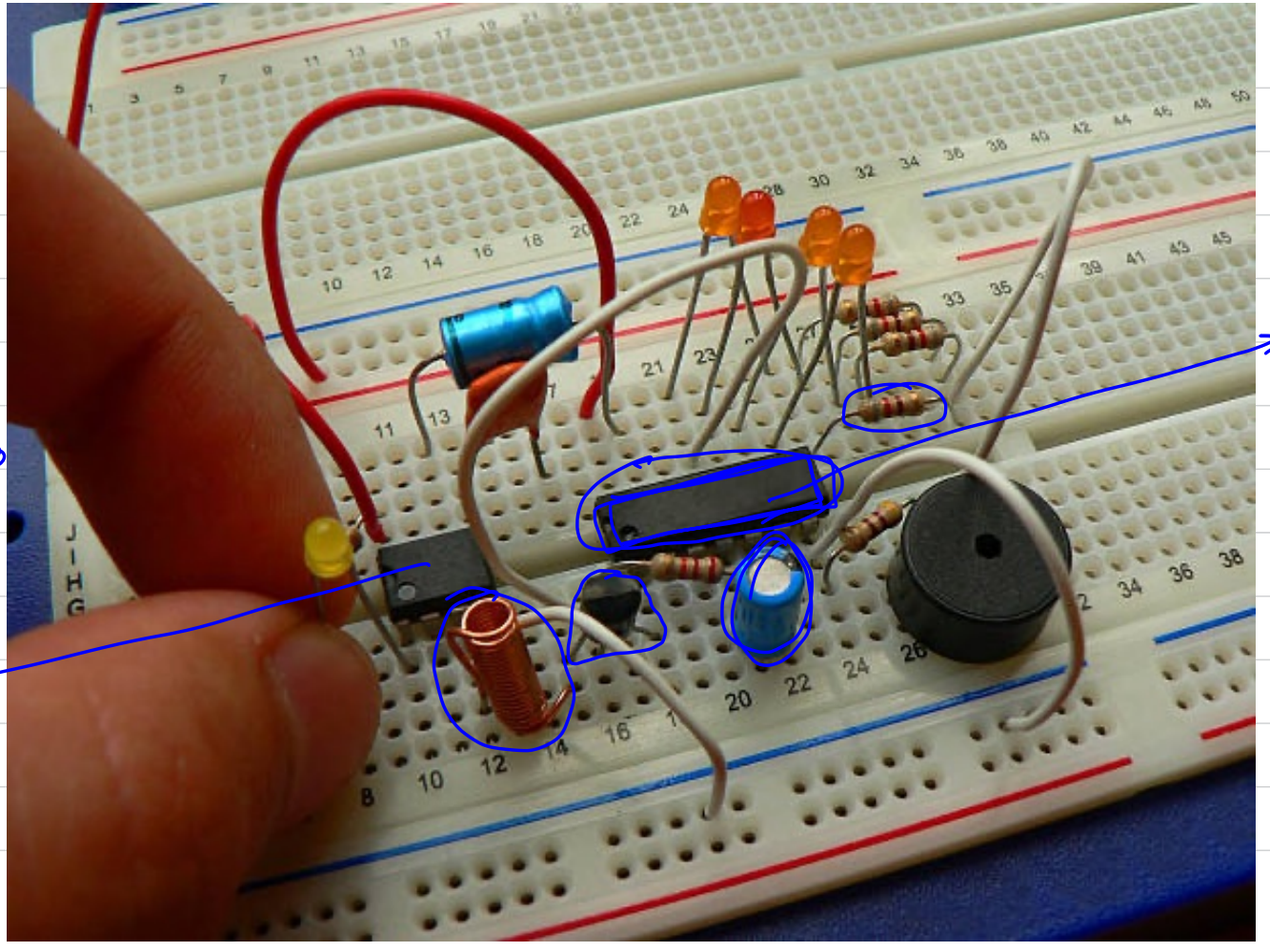
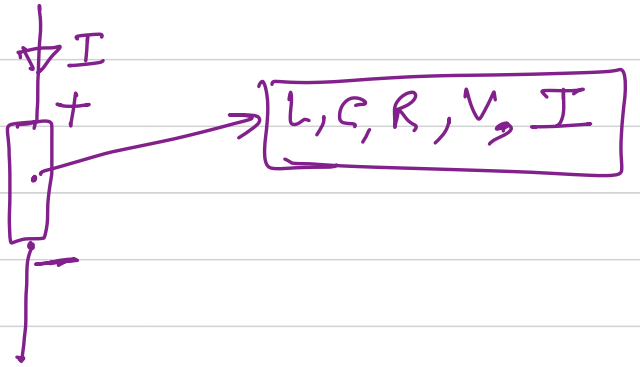

I.C
Operational Amplifier
Feedback

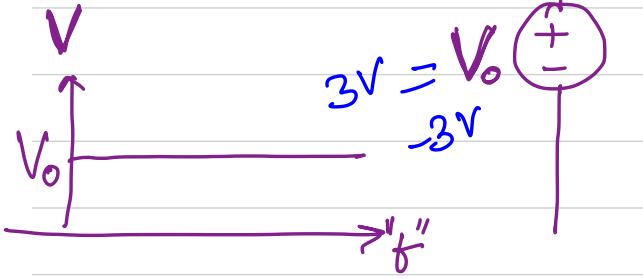
(1) Active Components : Supply energy to the circuits.

{ (1) Voltage source
(2) Current source }

Passive sign convention :

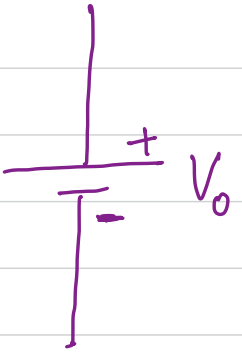


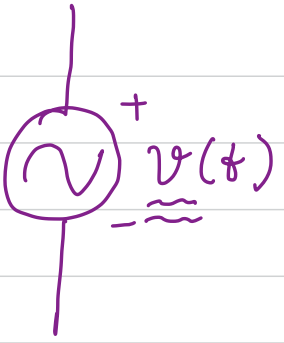
Voltage Source

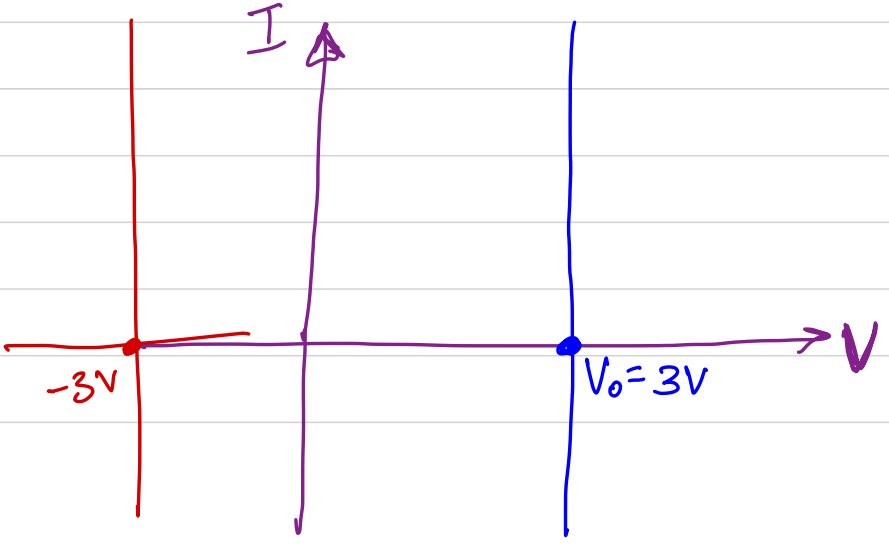


$3V = V_0$

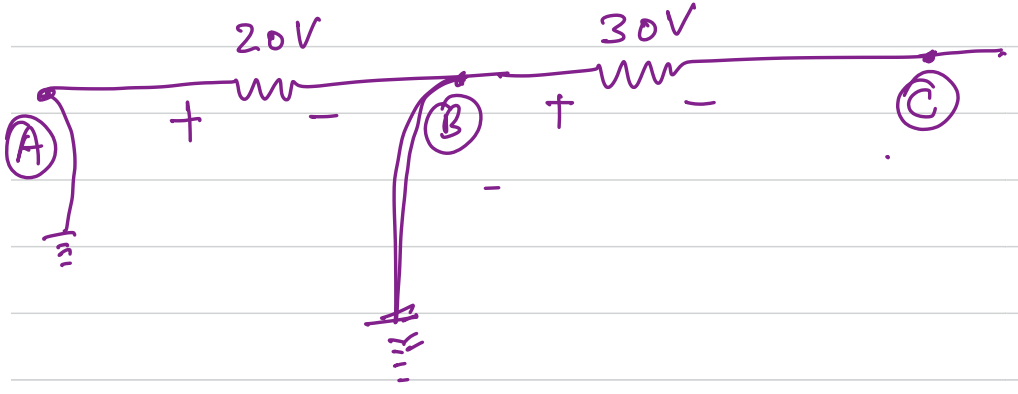
$-3V$







Relative Potential



$V_{BC} = V_B - V_C$

$V_{BC} = 30 - 0 = 30V$

$V_{AC} = 50V$

$V_{AB} = 20V$

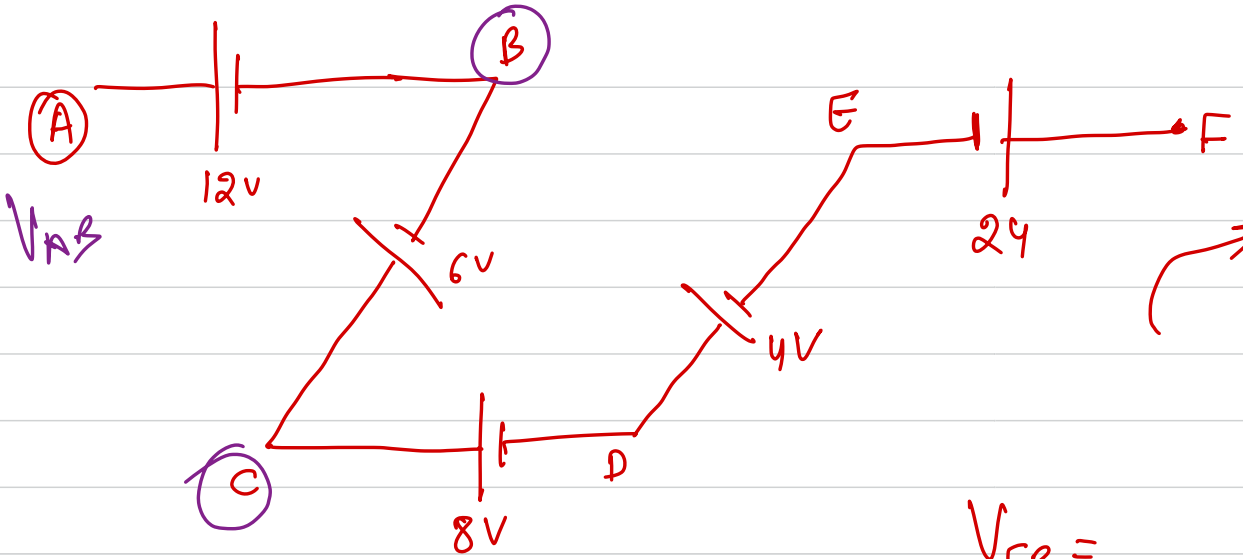
$V_{BA} = -20V$

$V_B - V_A$

$V_{CA} = -50V$

$V_{BC} = +30V$

$V_{CB} = -30$



V_{AB}

$V_{FB} = 18V$

$V_{AF} = -6V$

$V_{EA} = -18V$

$V_{FB} =$

$V_{AE} = 18V$

V_{AE}

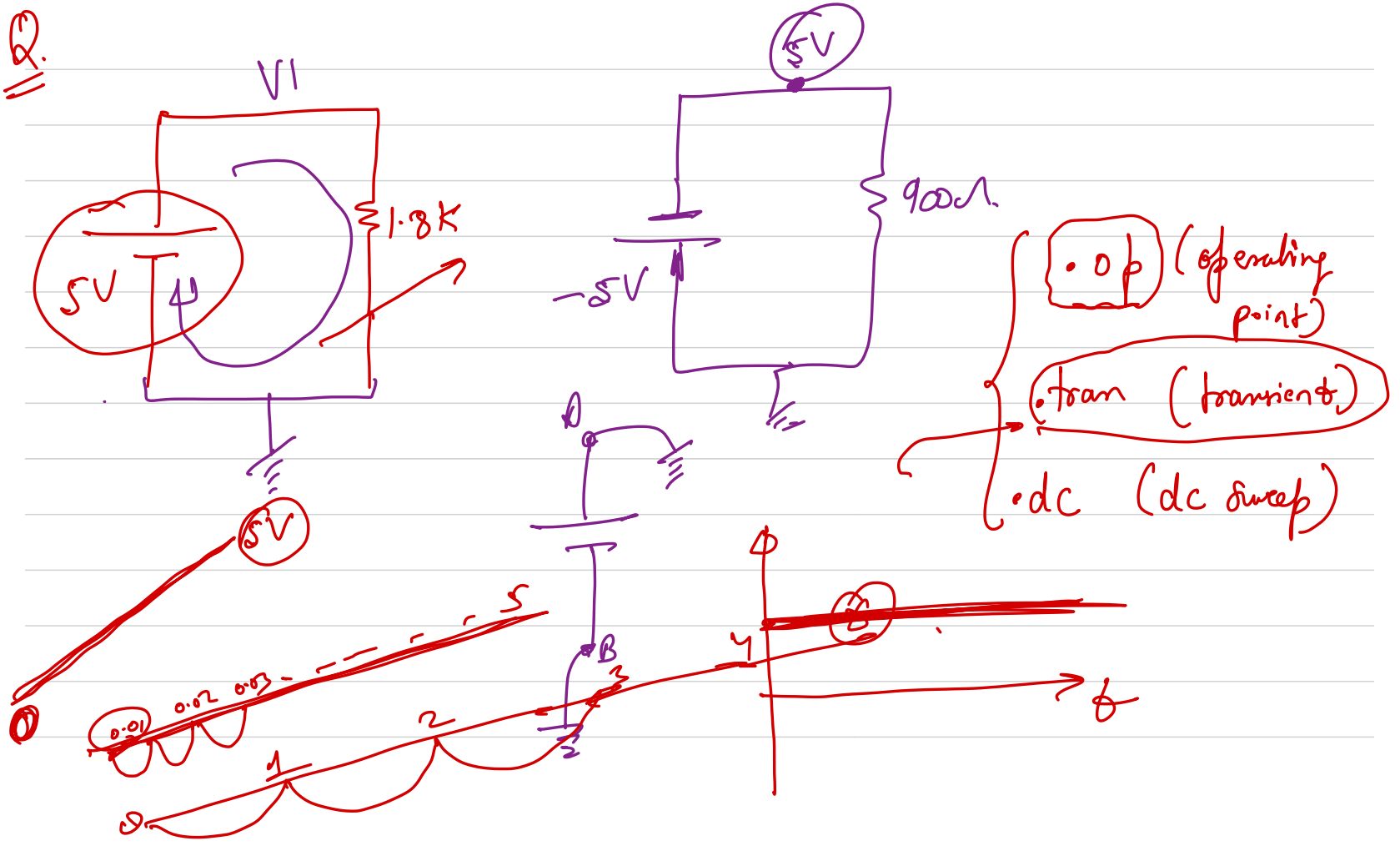
$V_{AF} = V_{AB} + V_{BC} + V_{CD} + V_{DE} + V_{EF}$

$= 12 + -6 + 8 + 4 - 24 = -6V$

$V_{EA} = V_{ED} + V_{DC} + V_{CB} + V_{BA} = -18V$

$-4 - 8 + 6 - 12$

Q.


V1
1.8K
5V
5V
5V
900Ω
-5V
.op (operating point)
.tran (transient)
.dc (dc sweep)
0
A
B
0.01
0.02
0.03
5
4
3
2
1
0
t