Ad: Melih   Soyad: Yelman   No: 21011702   İmza: mme

Hesaplar	Ölçümler

1)

$V_1 < V_2 = V_0 = -V_{cc}$

$V_1 > V_2 = V_0 = -V_{cc}$

$V_1 = V_2 = V_0 = 0$

V_{cc}	V_1	V_2	V_0
±12	6 > 5		-12
±12	3 < 5		12
±12	5 = 5		0

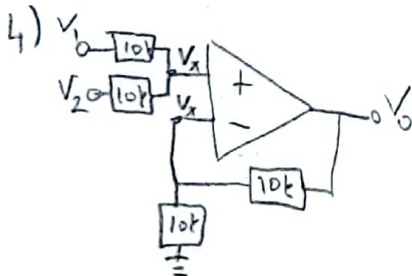|	Giriş	V_1	6	3	5
		V_2	5	5	5
	Çıkış	Hesap	-12	12	0
		ölçüm	-12	12	0

3)
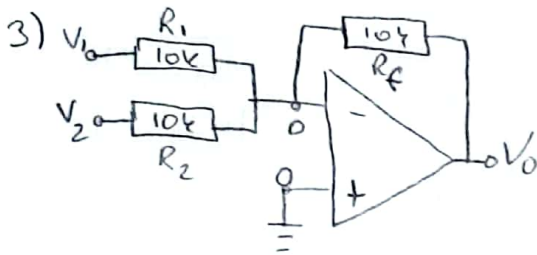
$$\frac{V_1 - 0}{10k} + \frac{V_2 - 0}{10k} = \frac{0 - V_0}{10k}$$

$$V_1 + V_2 = -V_0$$

$$V_0 = -(V_1 + V_2)$$

$V_0 = -(-5+3) = 2, = -(-5+12) = -7$

$= -(3+5) = -8, = -(10+5) = -15$

2)

Volt/div
5v/div

Time/div
0.1ms/div

4)

$$\frac{V_1 - V_x}{10k} + \frac{V_2 - V_x}{10k} = 0, \quad \frac{V_x - 0}{10k} + \frac{V_x - V_0}{10k} = 0$$

$$V_1 + V_2 = 2V_x$$

$$2V_x = V_0$$
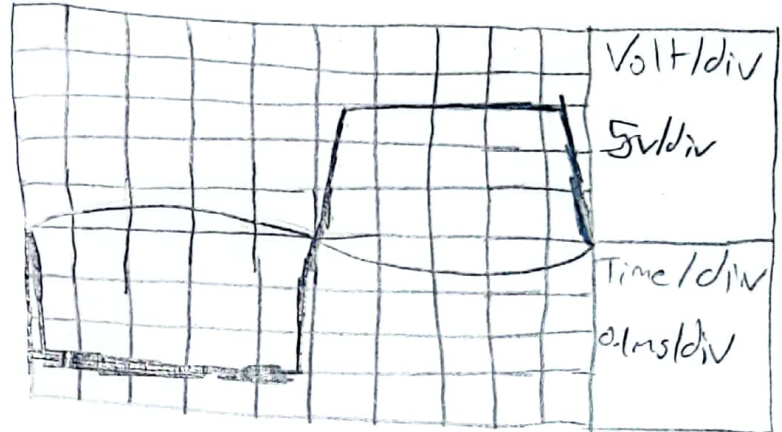
$$V_1 + V_2 = V_0$$

$V_0 = (-5+3) = -2, = (-5+12) = 7$

$= (3+5) = 8, = (10+5) = 15$

Giriş	V_1	-5	3	-5	10
	V_2	3	5	12	5
Evirmeyen Çıkış	Hesaplar	-2	8	7	15
	ölçüm	-2	8	7	12
Eviren Çıkış	Hesaplar	2	-8	-7	-15
	ölçüm	2	-8	-7	-12

Hesaplır

Ölçümler

5)
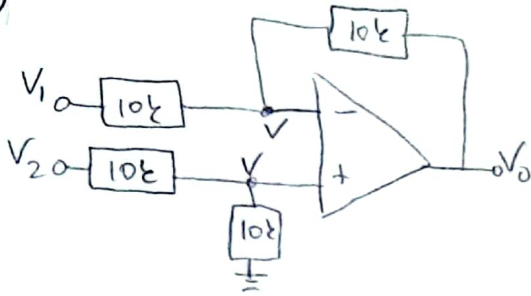
$$\frac{V_1 - V}{10k} = \frac{V - V_0}{10k} \Rightarrow V_0 = 2V - V_1$$

$$\frac{V_2 - V}{10k} = \frac{V - 0}{10k} \Rightarrow V_2 = 2V$$

$$V_0 = V_2 - V_1$$

$$V_0 = (5 - 12) = -7,$$
$$= (5 - (-3)) = 8,$$
$$= (-5 - 4) = -9$$

Giriş	V_1	12	-3	4
	V_2	5	5	-5
Çıkış	Hesaplanan	-7	8	-9
	Gerilim	-7	8	-9

6)

volt/div
5v/div

time/div
0.1ms/div