EJERCICIO CLASE DEL MIERCOLES

6.16 The equivalent capacitance at terminals *a*-*b* in the circuit of Fig. 6.50 is 30 μF. Calculate the value of *C*.

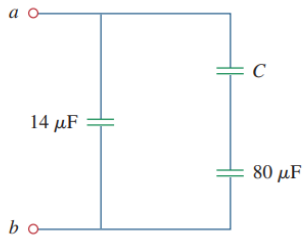
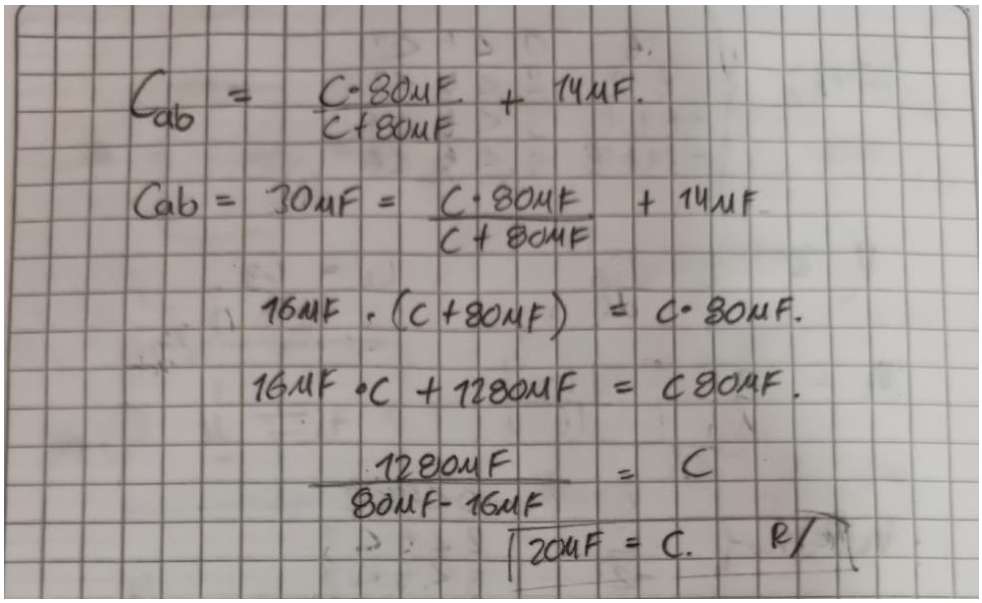


Figure 6.50
For Prob. 6.16.



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6.63 In the circuit of Fig. 6.85, sketch v_o.

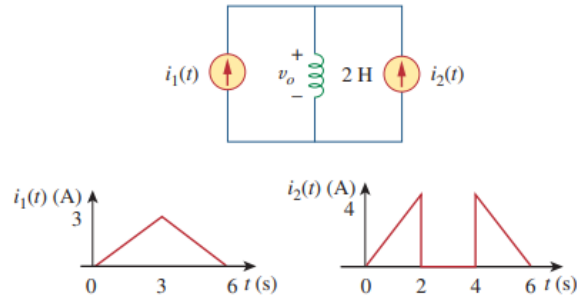
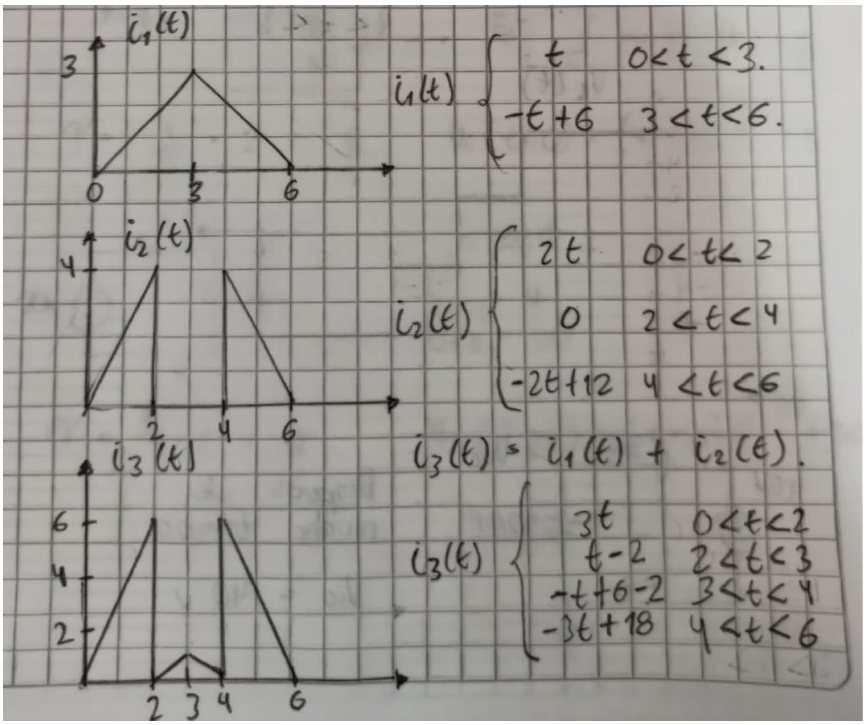
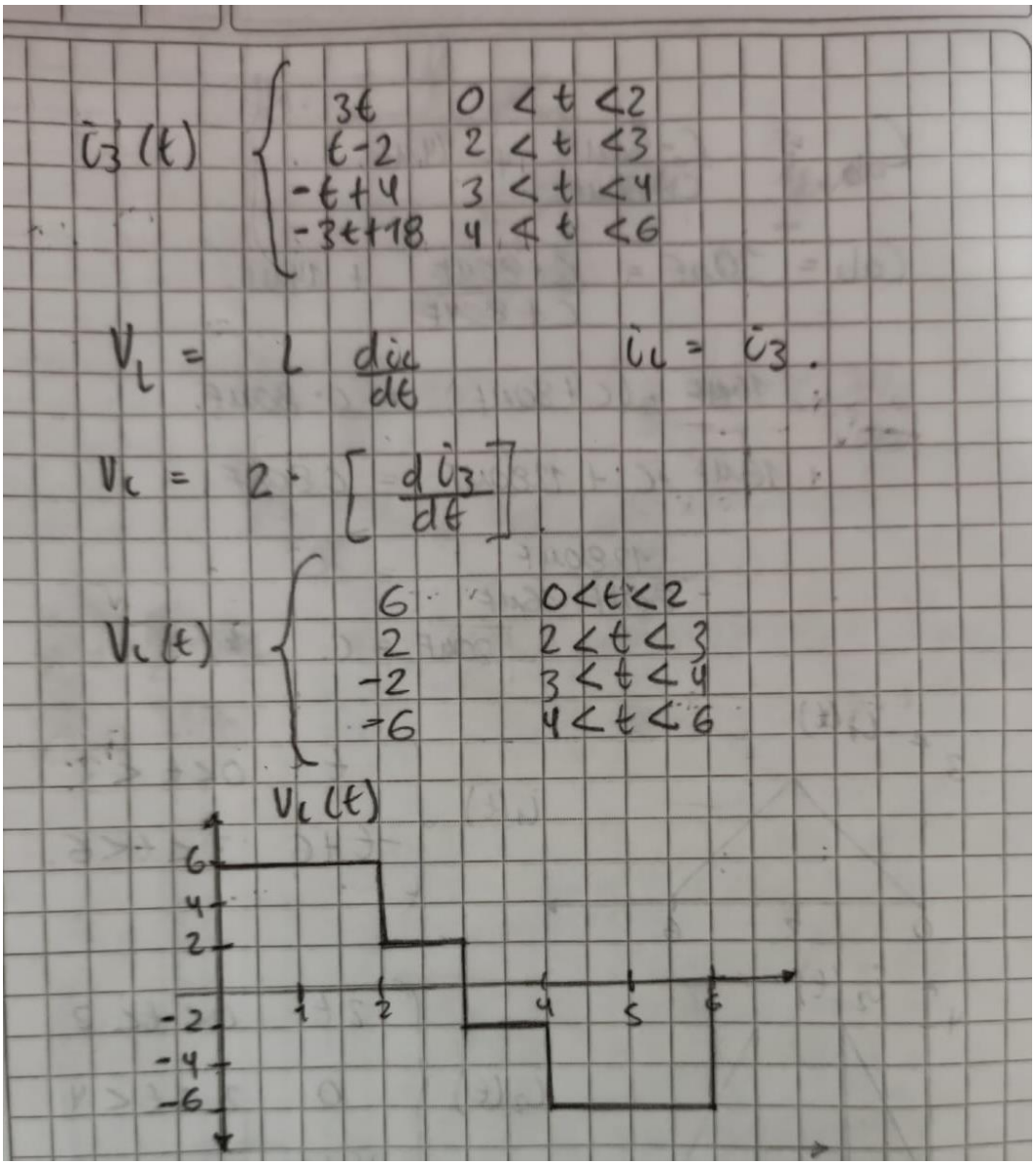


Figure 6.85
For Prob. 6.63.




$i_3(t)$
$3t \quad 0 < t < 2$
$t-2 \quad 2 < t < 3$
$-t+4 \quad 3 < t < 4$
$-3t+18 \quad 4 < t < 6$
$V_L = L \frac{di_L}{dt} \qquad i_L = i_3.$
$V_L = 2 \cdot \left[\frac{di_3}{dt} \right]$
$V_L(t)$
$6 \quad 0<t<2$
$2 \quad 2<t<3$
$-2 \quad 3<t<4$
$-6 \quad 4<t<6$
$V_L(t)$
6
4
2
-2
-4
-6
1
2
4
5
6

EJERCICIO CLASE DEL VIERNES

7.4 The switch in Fig. 7.84 has been in position A for a long time. Assume the switch moves instantaneously from A to B at $t = 0$. Find v for $t > 0$.

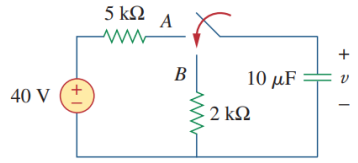
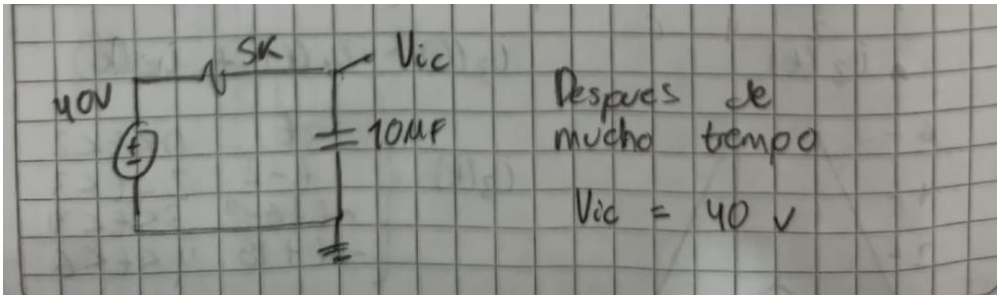
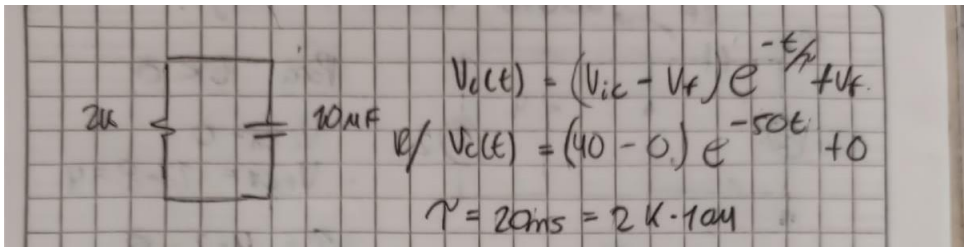


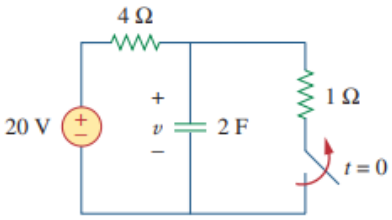
Figure 7.84
For Prob. 7.4.



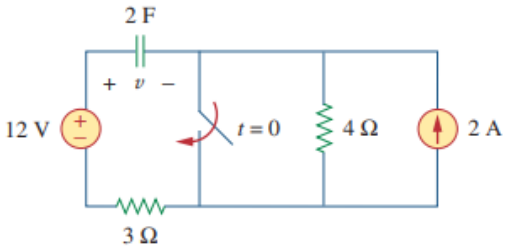


EJERCICIO CLASE DEL VIERNES

7.39 Calculate the capacitor voltage for $t < 0$ and $t > 0$ for each of the circuits in Fig. 7.106.

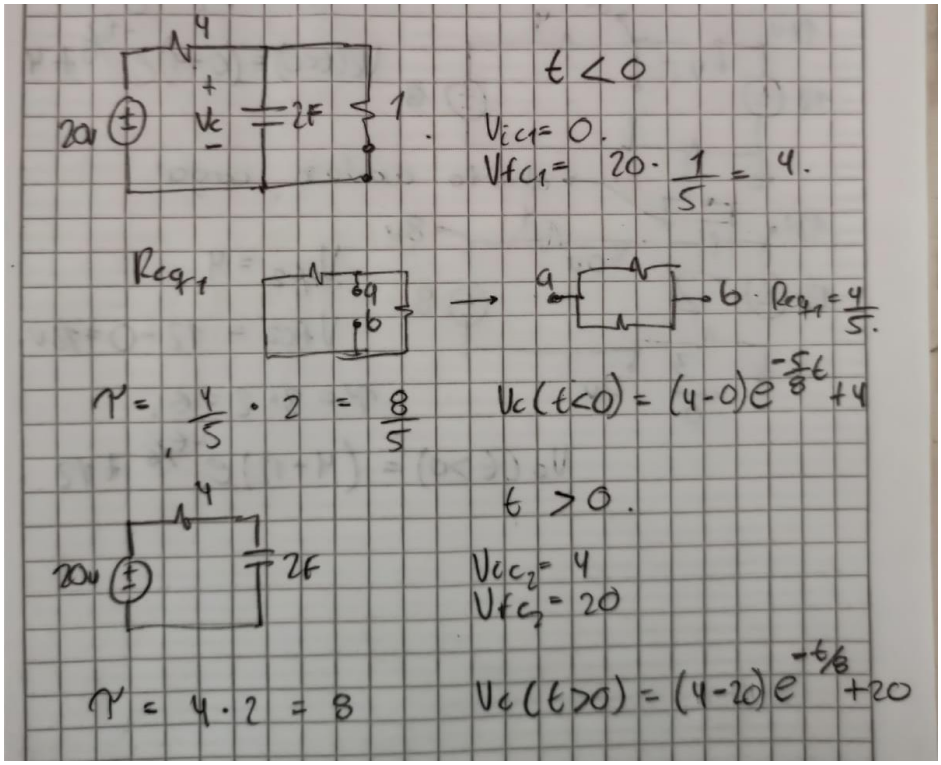


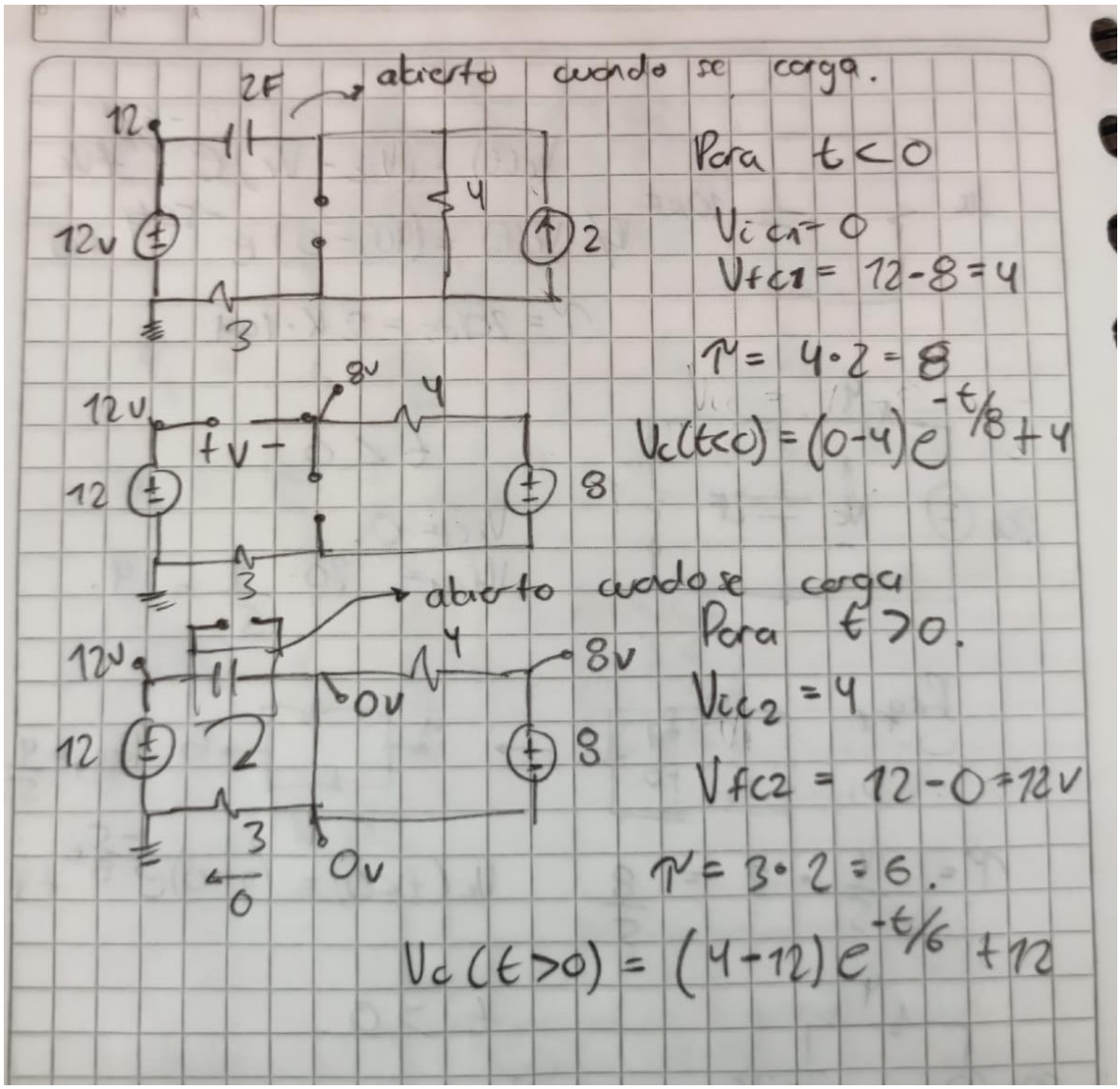
(a)



(b)

Figure 7.106
For Prob. 7.39.




2F
abierto cuando se carga.
12
12v
4
2
3
Para t<0
Vic1 = 0
Vfc1 = 12-8=4
τ = 4·2 = 8
Vc(t<0) = (0-4)e^-t/8 + 4
8v
4
12v
+v-
12
8
3
abierto cuando se carga
Para t>0.
12v
4
8v
Vic2 = 4
0v
12
2
8
Vfc2 = 12-0=12v
3
0
0v
τ = 3·2 = 6.
Vc(t>0) = (4-12)e^-t/6 + 12