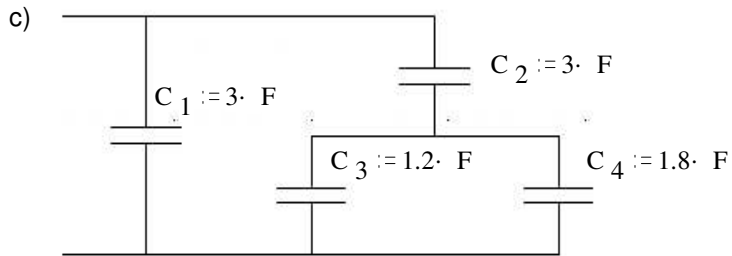
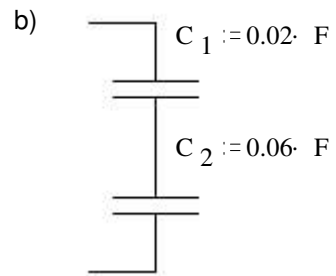
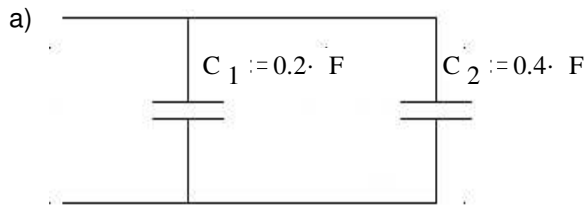
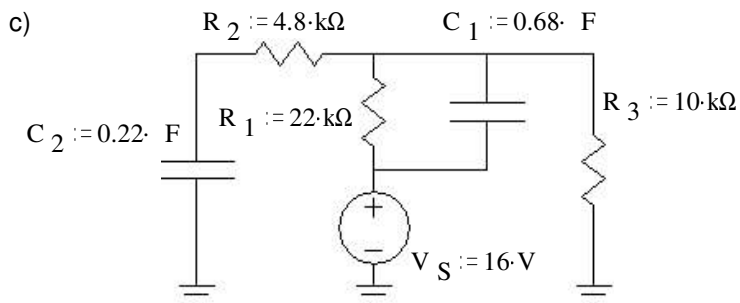
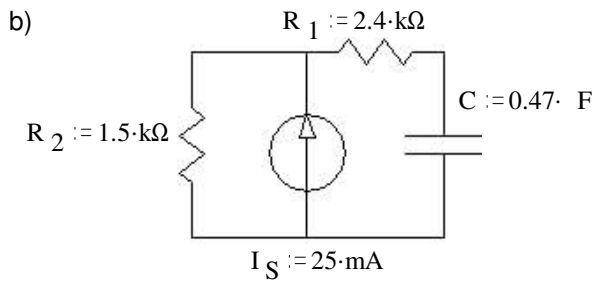
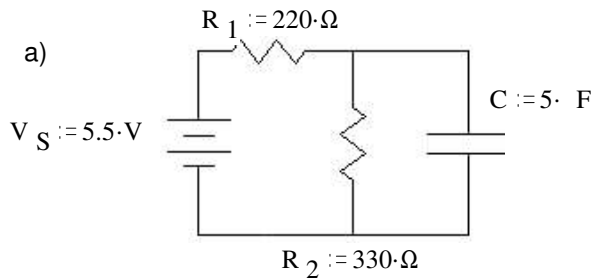


# ECE 1250 homework # 7

1) Find  $C_{eq}$  in each case

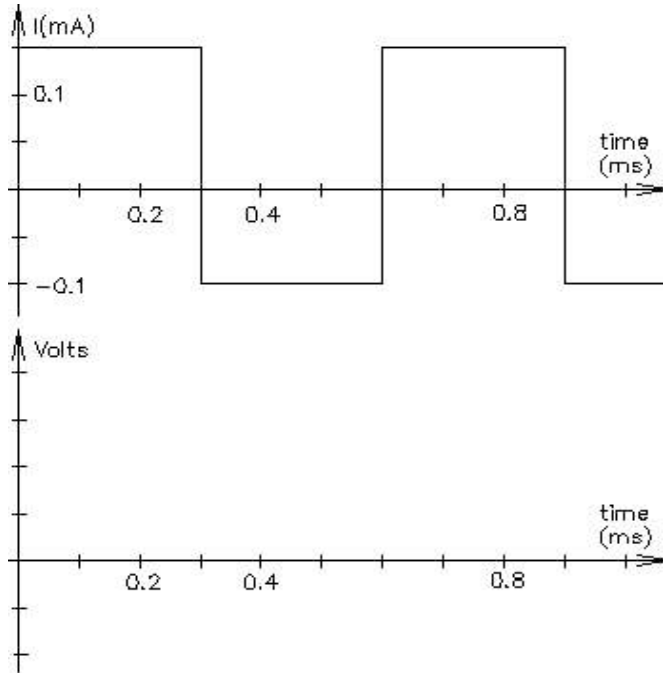


2. Each of the following circuits have been connected as shown for a long time. Find the voltage across each capacitor and the energy stored in each.

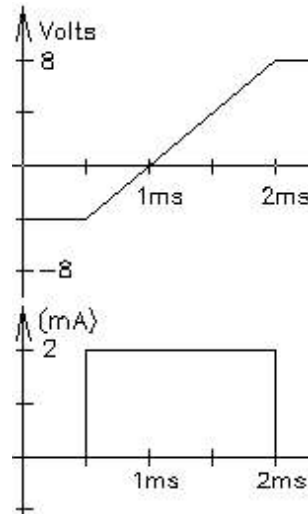


Name: \_\_\_\_\_ You may want to hand in this page with answers to problems 3 & 4.

3. The current waveform shown below flows through a  $0.025 \text{ F}$  capacitor. Make an accurate drawing of the voltage across it. Label your graph. Assume the initial voltage across the capacitor is  $0 \text{ V}$ .



4. A capacitor voltage and current are shown at right. What value is the capacitor?



**Answers**

1. a)  $0.6 \cdot \text{F}$     b)  $0.015 \cdot \text{F}$     c)  $4.5 \cdot \text{F}$   
 2. a)  $3.3\text{V}$   $0.027\text{-mJ}$     b)  $37.5\text{-V}$   $0.33\text{-mJ}$     c)  $11\text{-V}$   $0.0411\text{-mJ}$      $5\text{-V}$      $2.75\text{-J}$   
 3. Triangle waveform up  $1.8\text{V}$  down  $1.2 \text{V}$ , repeat.    4.  $0.25 \text{ F}$