First do the following Wiley-Plus assignment: Assignment #25a

After completing the Wiley-Plus, in your homework notebook, complete the following problems:

CH25 Question 1&3

CH25 Problems # No additional problems are assigned this assignment.

To check your work, the answers to the odd problems are in the back of the book.

The answers to the even problems are: none assigned.

Homework

Then complete the attached worksheets: (Note: the above problems were designed to ensure you have the skills to solve the worksheet problems. It is imperative to your learning of the problem solving technique to do the above problems BEFORE attempting the worksheet problems. You are graded on both! Homework notebooks are graded.)
For each of the equations below,

1) State what each term is in your own words ...
2) What the units of each term are...
3) What is the general use of that equation in your own words?

A. \[ q = CV \]

B. \[ C = \frac{E_o A}{d} \]

C. \[ C_{eq} = \sum_{j=1}^{n} C_j \]

D. \[ \frac{1}{C_{eq}} = \sum_{j=1}^{n} \frac{1}{C_j} \]
Find $C_{eq}$, the capacitance necessary to replace all the capacitors with one single capacitor in the circuit shown.

Show all work:
CH-25-A-3:

What is the charge on capacitor C₃ if the below capacitor network is attached to a 12v car battery?

Show all work:
Given the network of five capacitors (shown below) with capacitance $C_1 = 10 \text{ pF}$, $C_2 = 20 \text{ pF}$, $C_3 = 40 \text{ pF}$, $C_4 = 100 \text{ pF}$, and $C_5 = 100 \text{ pF}$:

(a) Determine the equivalent capacitance of the circuit.

Show all work:

(b) Determine the charge $q_1$ on the plates of capacitor $C_1$.

Show all work: