**ELECTRIC FIELDS COLLABORATIVE PROBLEMS**

1. An oil drop of mass 2.6 x 10-15 kg is suspended between two parallel plates 0.50 cm apart, and remains stationary when the potential difference between the plates is 270 V. What is the charge on the oil drop and how many excess or deficit electrons would this be equal to?
2. An electron with a mass of 9.11 x 10-31 kg is accelerated from rest across a set of parallel plates that have a potential difference of 110 V and are separated by 0.75 cm.
3. Determine the kinetic energy of the electron after it crosses between the plates.
4. Determine the final speed of the electron.
5. Determine the acceleration of the electron while it is between the plates.
6. Determine the time required for the electron to travel across the plates.







