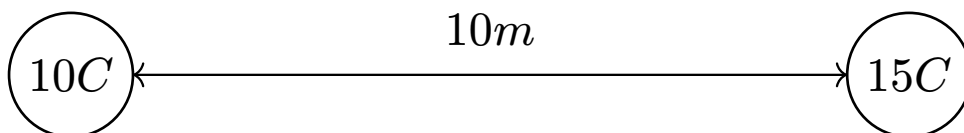


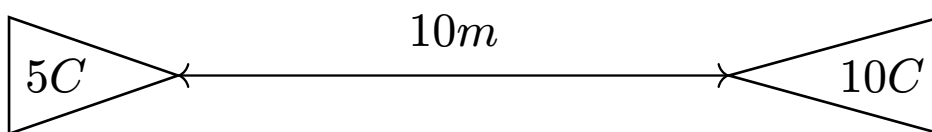
Problem-Set: 01

Static Electricity (Coulomb's Law)

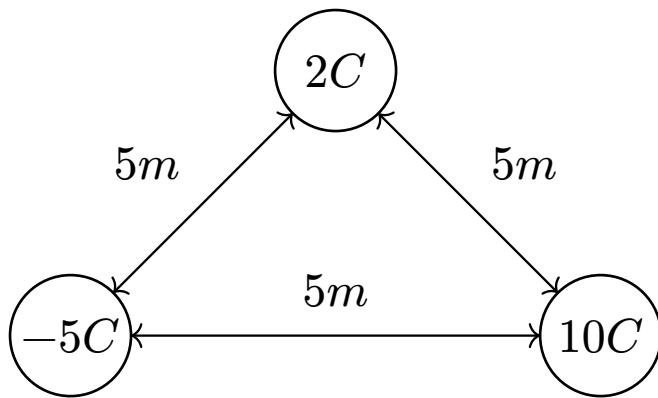
1. What is the electrostatic force if the radii of two circles are $4m$?



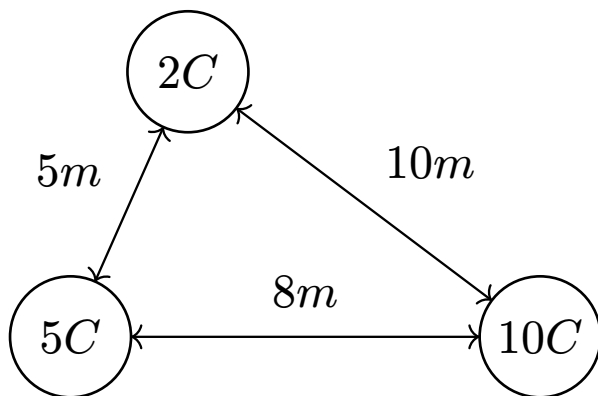
2. If the length of each side of an equilateral triangle is $4m$, then what is the electrostatic force between them?



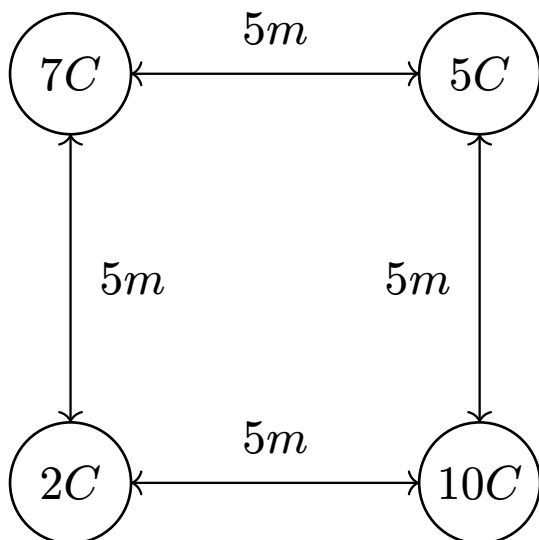
3. What is the value of the acceleration of an electron and a due to electrostatic force acting between at a distance of 2\AA ?
4. Compare the difference between electric force and gravitational force acting between two electrons.
5. Determine the electric force acting between two α particles.
6. Determine the resultant force on the $2C$ charge.



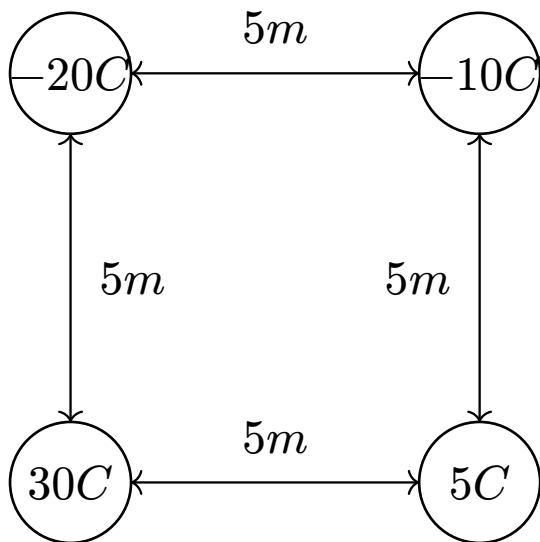
7. Determine the resultant force on the $2C$ charge.



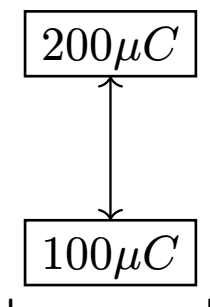
8. Determine the resultant force on the $5C$ charge.



9. Determine the resultant force on the $5C$ charge.



10. At what distance between the two objects will the second object float in space? [$m_1 = 10mg$]



12. How should QC charge be distributed between two objects so that the electric force between them is maximized?