**Electrostatics**

**Anurag Dutta**

**December 6, 2021**

E – Mail: [1anuragdutta@gmail.com](mailto:1anuragdutta@gmail.com)

**1 Electric Charge**

Electric Charge is that property of a body due to which it interacts with other charges. There are three types of charges:-

* Positive Charges
* Negative Charges
* Neutral Charges

S. I. unit of electric charge is ‘’ – Coulomb.

**2 Coulomb’s Law**

Force between two charges and is , with being the distance between them.

**3 Electric Field**

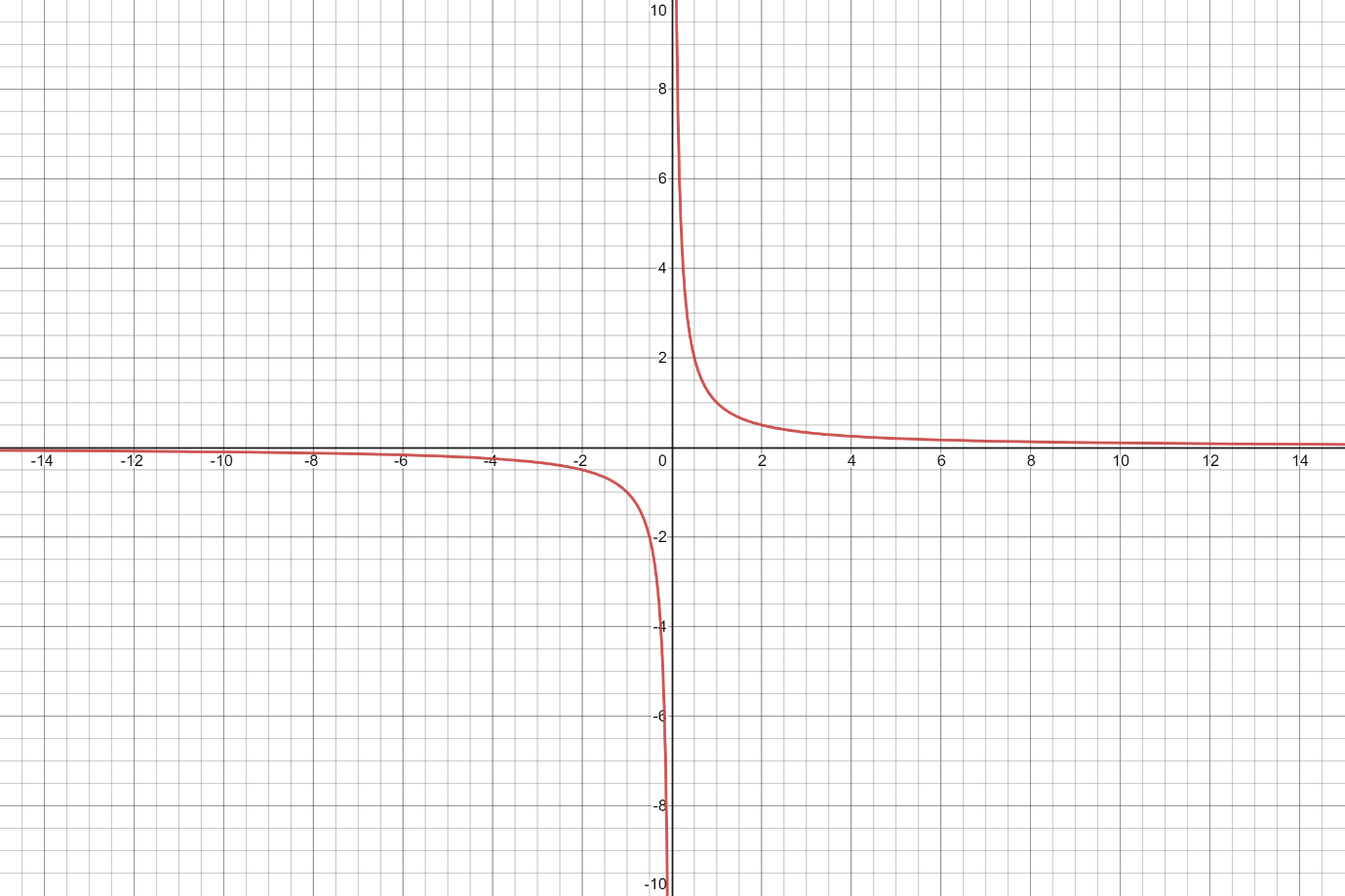
It is the net force per unit positive charge

the S. I. unit of Electric Field is .

Electric Field due to

1. A point charge

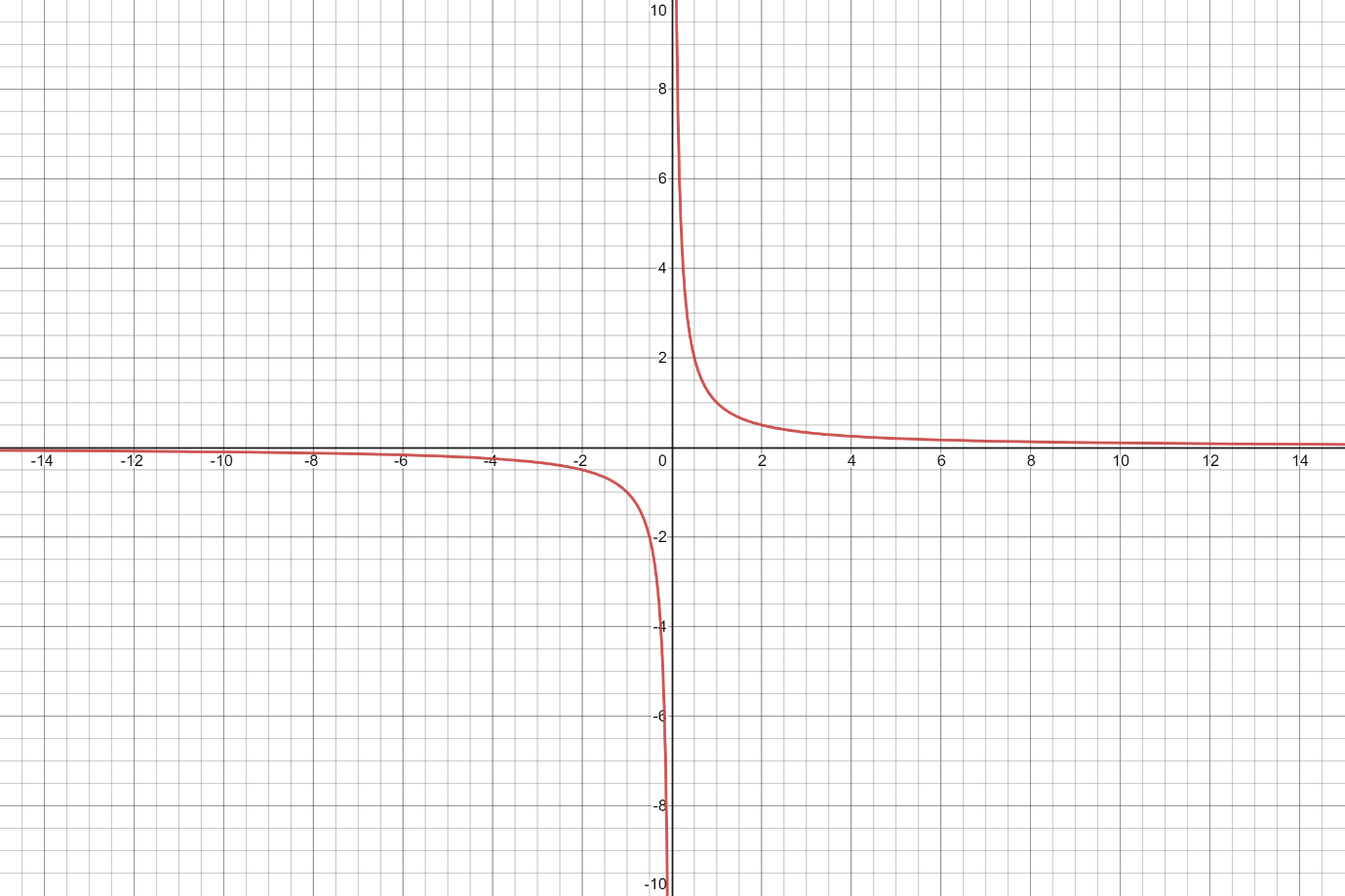
The plot of the Electric field () versus radial distance () is given below.



2. A linear charged rod of charge and length () at a distance from the end of the rod.



The plot of the Electric field () versus radial distance () is given below.



3. A charged conducting sphere of charge and radius

