###### Electromagnetism Chapter 16 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **Electrostatics**

Electricity is……….

![C:\Users\Chris\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\3OIYP4WD\MPj04075660000[1].jpg]()

![C:\Users\Chris\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\KXDAGIA3\MPj04331720000[1].jpg]()

![C:\Users\Chris\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\3OIYP4WD\MPj03904530000[1].jpg]()

![C:\Users\Chris\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\JXFC1SZJ\MPj04330590000[1].jpg]()

Electric charge is quantized:

-- charge is measured in coulombs (C)

 -- charge on one p+ or e– =

A conductor loses –1.05 x 10–18 C of charge. How many e– did it lose?

Electrostatic force can be:

 ATTRACTIVE REPULSIVE

 +

+

 +

–

 –

–

Magnitude of elec. force between two charges is found using Coulomb’s law:

 kc = 9 x 109 N.m2/C2

q = magnitude of charge (C)

r = separation between charges (m)

A +4.0 x 10–8 C charge and +7.6 x 10–9 C charge are 28 cm apart.

+

 +

Find mag. and dir. of force between them.

How far apart must two protons be for them to repel each other with a force of 7.6 x 10–26 N?

 +

+

Principle of Superposition

What happens when there are more than two charges present?

Experiments show that