Charge

The metric unit for charge is the COULOMB.

1 C of charge = 6.24×10^{18} elementary charges (e)

An elementary charge is the smallest charge possible and is equal to the charge on one electron.

1 e = 1.6×10^{-19} C

1 electron = -1.6×10^{-19} C
1 proton = $+1.6 \times 10^{-19}$ C

The charge on an object is calculated using...

$$Q = n \times e$$

- Q: charge
- n: # extra or lost electrons
- e: elementary charge

$Q = ne$

An electron has a charge of -1.6×10^{-19} C. How many electrons must be removed from a glass rod to give a charge of $+4.8 \times 10^{-8}$ C?

Steel ball #1 has a charge of -6μC. Steel ball #2 has a charge of -4μC. If the balls are allowed to touch and are then separated once again, what will be the charge on each ball?

How many electrons will be on each ball?

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