

AP1 - Chapter 18/20 Review

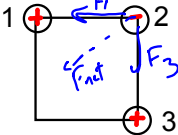
$F_e = kq_1q_2/r^2$

= Coulomb's Law = understand how variables can change F_e

DON'T plug in signs

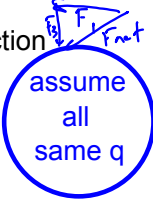
$\mu = 10^{-6}$ $F_e^2 + F_3^2 = F_{net}^2$

DO draw FBD to determine direction



What is F on q_2 ?

$F_1 = F_3 = \frac{kq^2}{r^2}$



Conservation of charge

$q_1 + q_2 = 5C$


$1 + 4 = 5C$
 $2 + 3 = 5C$
 $2.5 + 2.5$

Voltage	Current	Resistance	Power
energy/charge	charge/sec	resists current	energy/time
pushes current	flow of current	decreases current	\$, flow rate
<i>volt</i> V	<i>amps</i> I	Ω R	<i>w</i> P
$V = IR$	$I = q/t$	$R = \rho L/A$ $R = R_0(1 + \alpha(T - T_0))$	$P = IV$ $P = I^2R$ $P = V^2/R$

Parallel	Series
multiple paths	ONE path
$1/R_t = \sum 1/R_i$ (R ↓)	$R_t = \sum R_i$ (R ↑)
$I_t = \sum I_i$	$I_t = I_i$
$V_t = V_i$	$V_t = \sum V_i$
$C_t = \sum C_i$ (C ↑)	$1/C_t = \sum 1/C_i$ (C ↓)

Equivalent Resistance

***do what you know FOR SURE first

*** pay attention to 

- > I(Total) vs I (through specific resistor or path)
- > V(Total) vs V (Across ONE branch)
- > R (Total) vs R (of one part, one resistor)