

SiQuENC: Electric charge transfer

Neatly and graphically represent situation(s)

Carefully read the problem three times.

Draw a time-ordered sequence of **comic strip panels**.

I ($t = t_i$)

II ($t_i < t < t_f$)

III ($t = t_f$)

Label objects with **known charges** (sign and/or magnitude).

Identify **requested unknowns**.

Graphically represent quantities and their relationships

Illustrate **representative microscopic positive and negative charges and transport**

- a. consistent with labeled charges
 - b. consistent with Coulomb's law (strength and direction)
 - c. and consistent with the types of charge carriers relevant to the problem
 - i. For **insulators**, positive and negative **charges** are **can move no farther than permitted by the rotation of molecules**.
 - ii. For **everyday solid conductors**, **positive atomic cores** are essentially **stationary** while **some electrons** are sufficiently free that they **can be transported** throughout the conducting material.
 - iii. For **everyday aqueous solutions**, both **positively charged and negatively charged dissolved ions** can be transported.
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Identify relevant allowed starting point equation(s)

$$\Sigma q_i + \Delta q_{\text{EXTERNALLY SUPPLIED}} = \Sigma q_f$$

Analyze

Communicate
