Physics 112

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Tuesday, April 9/19

1. Questions?
   Worksheets:
   Problems for Understanding (PFU) Page 151, #26-28, 30-32, 34
   Practice Problems (PP) - C4, Page 144: 5-8

2. FA: First Law Problem

3. Second Law Problems - Three Types - Finish Copying Notes

4. Second Law Problems - Examples - To Be Continued

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5. Elevator Problems

6. Worksheet -> C5 – Newton's Second Law
   Worksheet -> Text: Page 163, PP #1-3
   Text - Page 168, PP #4-8

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1. Questions?
   Worksheet -> Textbook: Page 646, #11-14
   Textbook: Page 655, #20-24

2. FA - Electric Field Strength (optional)

3. SA - Electrostatics
   Date: Thursday, April 11/19
   Topics and Format - See Next Page

4. Unit 3 - Electric Circuits

5. Potential Difference and Flowing Charge
   - Electron Flow
   - Conventional Current

6. Electric Current

7. Circuit Symbols

8. Ammeters vs. Voltmeters

9. Resistance to Flow of Charge

10. Factors Affecting Resistance in a Wire - To be Continued

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11. Worksheet ->Textbook: C15, Page 708, #16-20

12. Ohm's Law

13. The VIR Chart

14. Series Circuit

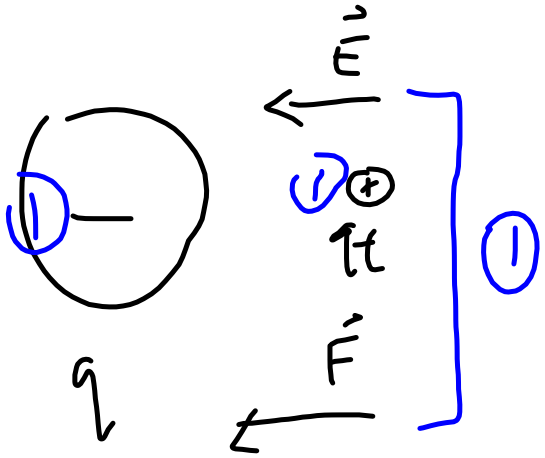
Formative Assessment – Electric Field Strength

A small charged sphere is placed at a point in an electric field that has a magnitude of 2.1 x 10^4 N/C and points due west. The charge experiences an electrostatic force of 0.072 N west. What is the magnitude and sign of the small charged sphere? Include a sketch showing the source charge and its sign, the test charge and its sign, the direction of the electrostatic force and the direction of the electric field.

$q_t = ?$

$E = 2.1 \times 10^4$ N/C

$F = 0.072$ N



(1)

$E = \frac{F}{q_t}$ (1)

$q_t = \frac{F}{E}$ (1)

$q_t = \frac{0.072\ N}{2.1 \times 10^4\ N/C}$

$q_t = 3.4 \times 10^{-6}$ C. (1)

3.4 mC.

WS ->

Physics 122
Topics - U3 S1

- electrostatics
- types of charge (+ and -)
- transfer of charge
- Law of Conservation of Electric Charge
- electrostatic force (attractive/repulsive)
- Coulomb's Law: 2 charges, 3 charges
- electric fields: diagrams - 1 source charge } non- uniform
  2 source charges }
  2 charged plates } uniform
- electric field strength/intensity
- electric potential energy: E_Q , joule
- electric potential difference (voltage): V, volt

Format: **MC**

*q = N/e

Problems

- Coulomb's Law - 2 charges
- Coulomb's Law - 3 charges with angle
- Electric Field Strength
- Electric Field Strength

Science 122

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1. Moles and Molar Mass

2. Questions?
   Worksheet - Half-Life, Activity and Decay Constant #1 and #2

3. Video - Quantum Mechanics (Stopped at 42:31)

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4. Electron-volt

5. Frequency

6. Quantization of Energy

7. The Photoelectric Effect

8. Wave-Particle Duality of Light

9. Worksheet - Energy of Photons, Work Function, de Broglie Wavelength, Etc.

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1. Return -> FA - Counting Atoms
2. Questions?
   Worksheet: Formation and Decomposition Reactions
3. Single Replacement Reactions
4. Double Replacement Reactions - Completed Examples

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5. Worksheet: Single and Double Replacement Reactions
6. Combustion Reactions
7. Worksheet: Combustion Reactions
8. Identifying Reaction Types
9. Translating Sentences or Word Equations into Balanced Chemical Equation