March 31 Gradekeeper Type Report

April 1 AM PT No School.

April 13 (Wed.) Report Cards

April 14 (Thur.) Evening PT

Science 122

Tuesday, March 22/16

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1. Return: Quiz - Magnetic Forces and Circular Paths

2. Red Text: Page 518, Practice Problems #1, #2, #3
   Page 531, Applying Concepts #1, 2, 8, 10
   Page 532, Problems #3, #5, #8, #9
   Worksheet: Conducting Rods and Lenz's Law
   Worksheet: Transformers
   Worksheets - Review

4. Test - Magnetism -> Thursday, March 24/16

5. Topic - Optics

Mistakes: Conversions

ie/ cm $1\,cm = 10^{-2}\,m$

μC $1\,\mu C = 10^{-6}\,C$

kV $1\,kV = 10^{3}\,V$

mm $1\,mm = 10^{-3}\,m$

data

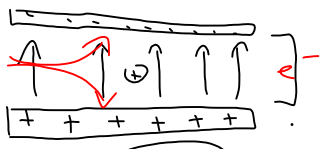
21.5 A -> 25.1 A

Square root.

$E_K = \frac{1}{2} m v^2$ <-

$V = \sqrt{\frac{2E_K}{m}}$ <-

#5. a) e^- ->



b)

V

d

V

B

q

$V = \frac{E}{B}$ $V = Ed$

$E = \frac{V}{B}$ $E = \frac{V}{d}$

d) e^- F_B F_E $F_E > F_B$

Physics 112

Tuesday, March 22/16

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1. Return: Quiz - Velocity-Time Graph
2. Kinematic Equations - To Be Continued

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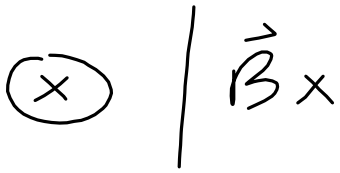
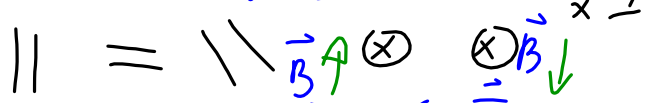
3. Worksheet - Motion Problems
4. Freely Falling Bodies

Test Topics - Magnetism

- magnetic field lines



- symbols: into and out of the page ⊗ ⊙
- solenoids/electromagnets
- Hand Rules: #1 → Find dir. $\vec{B}$: straight wire
  R → I #2 → Find N pole : coil
  L → e⁻ #3 → Find the dir. of $\vec{F}_B$ on a wire
- forces on two parallel wires


- calculate strength of magnetic fields
- force on a wire $F = ILB\sin\theta$ × $L = ext$
- force on a charged particle $F = qvB\sin\theta$ $F = ma$ $E_K = \frac{1}{2}mv^2$ $F = mg$ $p = mv$
- circular paths $F_B = F_C = ma_C$ $r = \frac{mv}{qB}$
  - #3 1st modification fingers → $\vec{B}$, thumb → $\vec{v}$, palm → $\vec{F}$
- velocity selector and mass spectrometer $E \perp B$ $v = \frac{E}{B}$, $V = Ed$, $\frac{q}{m} = \frac{2V}{B^2r^2}$
  A list question in the last quiz
- electromagnetic induction
  - #3 2nd modification fingers → $\vec{B}$, thumb - dir. wire, palm → dir. $\perp$
  - Lenz's Law
  - EMF $EMF = V = BLv$, $V = IR$, $F = ILB\sin\theta$
    - conducting rods
      - #3 3rd modification fingers → $\vec{B}$, thumb → dir. of wire, palm → dir of $\vec{F}_B$
  - self-inductance
  - mutual-inductance
  - transformers

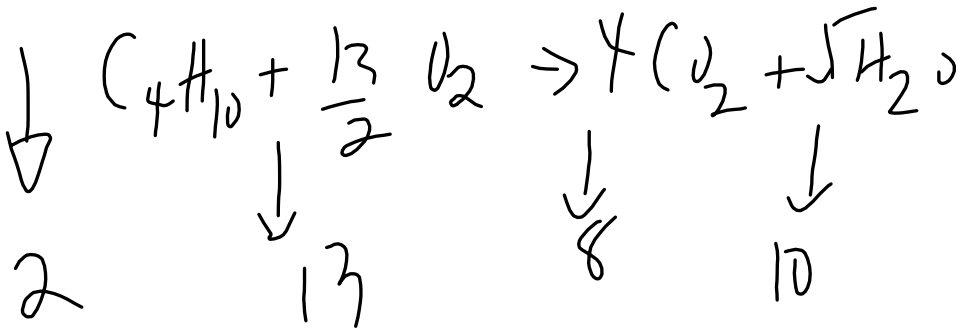
$$\frac{N_s}{N_p} = \frac{V_s}{V_p} \quad \frac{I_p}{I_s}$$

Science 10

http://mvhs.nbed.nb.ca/

Tuesday, March 22/16

1. Return: Quiz - Identifying and Balancing Chemical Reactions
2. Check - Worksheet: Predicting Products
3. Test - Chemistry - Thursday, March 24 /16
   - Topics



Topics - Chemistry Test

- define chemistry
- locate families and periods on the periodic table
- locate metals, nonmetals and metalloids on the periodic table
- atoms (electrically neutral)
  - subatomic particles (p+, n, e-)
  - atomic number #
  - # of protons and # electrons in atoms
- ions, cations, anions (electrically charged) cation → Na^+ (lost $1e^-$) anion → Cl^- (gain $1e^-$)
  - # of protons and # electrons in ions
  - types of ions: MI, MIMM, PI
  - names and symbols Sodium ion, Chloride, "ATE", "ITE"
- ionic bonds (transfer of electrons)
- ionic compounds (electrically neutral)
  - simple binary ionic compounds $NaCl$
  - ionic cpd with polyatomic ions $Mg(OH)_2$
  - ionic cpd with multivalent metals $CuCl_2$
    - roman numerals → Copper (II) chloride
  - ionic cpd with MM and PI $Fe_2(SO_4)_3$
  - names ⟷ chemical formulas
- covalent bonds (sharing of electrons)
- prefixes
- molecular compounds - simple binary compounds CCl_4
  - diatomic molecules, S_8, P_4, H_2O, NH_3, H_2O_2

H_2, O_2, N_2, F_2, Br_2, I_2, Cl_2

  - names ⟷ chemical formulas
- Law of Conservation of Mass
- count atoms
- chemical reaction, reactants, products R → P
- balance chemical reactions
- identify five types of chemical reactions: F, D, SR, DR, C
- translate word equations to balanced chemical equations
- predict products of chemical reactions

Format: Multiple Choice.
- Like Assignment / Quiz Instructions.

Physics 122

Tuesday, March 22/16

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1. Return -> Assignment: U1 - S2 -> Static Torque
2. Check -> Textbook -> Page 110 - #21, 22, 25, 27(a)
   Page 117 - #23, 24, 29
3. Plane Problems
4. Intersection Problems - To Be Continued
5. Worksheets - Relative Velocity Problems