

Science 10

Monday, April 30/18

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1. Return - SA - Physics #1
 2. Graphing Basics
 3. [Worksheets - Finding Coordinates Small Grids \(2\)](#)
 4. Optional Assignment - Graphing Characters (Max. 2)
- Due: Friday, June 1/18
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5. Slope
6. Worksheet - Finding Slope from a Graph
7. Physical Quantities
8. Distance vs Time Graph
9. Slope and Average Speed
10. Worksheet - Distance vs Time Graph
11. Various Distance-Time Graphs
12. Matching a Graph to a Story
13. Worksheet - More Distance vs Time Graphs

Physics 112

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Midterm

1. Concepts: U2 S3 - Introduction to Momentum
2. Momentum
3. Impulse
4. Worksheet: C5 - Momentum -> Page 197: PP #29
C5 - Impulse -> Page 200: PP #30-32
5. Impulse-Momentum Theorem
6. Worksheets:
 - C5 - Impulse-Momentum Page 203: PP #33-35
 - C5 - Momentum and Impulse-Momentum Page 209: PFU #37-45

Physics 122

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Return Midterms

1. Check:

Worksheet - Current -> Textbook - C15 - Page 696, PP #4-10

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

Worksheet - Ohm's Law -> Textbook: C15, Page 714, #21-25

Worksheet - Textbook: Page 737, #40-42

Page 744, #46-50

Worksheet - (Series) Textbook: Page 719, #27-31

2. Parallel Circuits

3. Worksheet - (Parallel) Textbook: Page 724, C15 - PP#32-35

4. Combination/Complex Circuits

5. Worksheet - (Complex) Textbook: Page 728, #36-37

Textbook: Page 749, #33-34

6. Worksheets - Circuit #1

Circuit #2

Science 122

Monday, April 30 2018

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Midterm - May 1/18

1. Topic - Magnetism
 2. Electric Charge Versus Magnetic Poles
 3. Lodestone and Ferromagnetic Materials
 4. Magnetic Domains
 5. Magnetic Field Lines
 6. Electromagnetism
 7. Right-Hand Rule #1
 8. Solenoid/Electromagnet
 9. Right-Hand Rule #2
 10. Right-Hand Rule #3
-
11. Two Current-Carrying Wires
 12. Electric Motors

Science 122 - Midterm

1. Optics \rightarrow Spherical Mirrors
 - Concave + convex
 \rightarrow Lenses
 \rightarrow convex and concave
 \rightarrow double ①

2. Fluid Mechanics

- Hydrostatics
 $\rightarrow P_2 = P_1 + \rho gh$
 $\rightarrow W_{app} = W - F_B$ ①
 $\rightarrow F_{net} = 0 N$
 or $F_B = W_B + W_L$

- Hydrodynamics

- $\rightarrow m = \rho Av, Q = v = Av, A_1 v_1 = A_2 v_2$
 $\rightarrow P_1 + \frac{1}{2} \rho v_1^2 + \rho g y_1 = P_2 + \frac{1}{2} \rho v_2^2 + \rho g y_2$ ①
 $A_1 v_1 = A_2 v_2$

* reference levels

3. Nuclear
 $\rightarrow A = \lambda N$ $N = N_0 e^{-\lambda t}$ ①
 $\lambda = \frac{\ln 2}{T_{1/2}}$ $m = m_0 e^{-\lambda t}$
 $A = A_0 e^{-\lambda t}$

\rightarrow Photoelectric effect

$$K_{max} = \frac{1}{2} m v^2 \quad E = hf$$

$$K_{max} = hf - \phi$$

photoelectron photon surface

$$* c = f \lambda$$

$$* 1 \text{ nm} = 10^{-9} \text{ m}$$

$$hf_c = \phi \quad \left. \vphantom{hf_c} \right\} hf_t = \phi$$

$$V_s = \frac{K_{max}}{e}$$

\rightarrow Energy level Diagrams

$$E_n = -13.6 \frac{Z^2}{n^2}$$
 ①

$$|\Delta E| = E_f - E_i$$

- de Broglie

$$\lambda = \frac{h}{mv}$$

\uparrow wavelength of particle

[10*]