

Physics 112

Wednesday, December 20/17

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1. Exam Topics and Format
2. Exam Review Problems
3. Review for SA - U3:S2&3
5. SA - U3: S2&3 -> Thursday, Dec. 21/17

Problems only.

1. E_k

2. $W = \Delta E_k$ $\left[\begin{array}{l} W = \ominus \\ E_k \text{ lost} \end{array} \right]$

3. $W = \Delta E_g$ $\left[\begin{array}{l} W = \ominus \\ E_g \text{ lost} \end{array} \right]$
 * include reference

4. $E_e = \frac{1}{2} kx^2$, $F = kx$
 * $F = mg$ $\begin{array}{l} \uparrow \\ \uparrow \\ \uparrow \end{array}$
 \vec{F}_R is opposite \vec{F} \downarrow
 $\vec{F}_R = F$

5. } Energy Conservation.

6. } $E_{ki} + E_{gi} + E_{ei} = E_{kf} + E_{gf} + E_{ef}$

1. Calculate the potential energy, kinetic energy, mechanical energy, speed, and height of the ball at the various locations. Report answers to 2 SDs.

①

$$E_g = \underline{2.0 \times 10^3 \text{ J}}$$

$$E_k = \underline{0}$$

$$ME = \underline{2.0 \times 10^3 \text{ J}}$$

$$v = \underline{0}$$

②

$$E_g = \underline{1.5 \times 10^3 \text{ J}}$$

$$E_k = \underline{5.0 \times 10^2 \text{ J}}$$

$$ME = \underline{2.0 \times 10^3 \text{ J}}$$

$$v = \underline{4.5 \text{ m/s}}$$

③

$$E_g = \underline{0}$$

$$E_k = \underline{2.0 \times 10^3 \text{ J}}$$

$$ME = \underline{2.0 \times 10^3 \text{ J}}$$

$$v = \underline{8.9 \text{ m/s}}$$

④

$$E_g = \underline{1.1 \times 10^3 \text{ J}}$$

$$E_k = \underline{9.0 \times 10^2 \text{ J}}$$

$$ME = \underline{2.0 \times 10^3 \text{ J}}$$

$$h = \underline{2.2 \text{ m}}$$

Physics 122

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1. SA - U3 S1: Electrostatics

2. Worksheet - Textbook: C15, Page 708, #16-20
Worksheet - Textbook: C15, Page 714, #21-25

3. Power

4. Worksheet - Textbook: Page 737, #40-42
Page 744, #46-50

5. Series Circuits

6. VIR Chart

7. Textbook: Page 719, C15 - PP#27-31

8. Parallel Circuits

9. Textbook: Page 724, C15 - PP#32-35

10. Combination/Complex Circuits

11. Textbook: Page 728, C15 PP#36-37

Science 10

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1. Optional Assignment - Graphing Characters (max 2 -20 pts each)
- Submit before Christmas break.
 2. SA - Physics #2
 3. Roller Coasters
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4. P5 - 100 Acre Wood Exercise
 5. Velocity
 6. Calculating Velocity
 7. Resultant Displacement
 8. Calculating Average Velocity
 9. Worksheet: Constant and Average Velocity Problems
 10. Position vs Time Graph
 11. Worksheets: Position vs. Time Graphs
 12. Velocity vs Time Graphs
 13. Worksheet - Velocity vs Time Graphs
 14. Acceleration
 15. Comparing Directions of Velocity and Acceleration
 16. Sample Problems -Acceleration