

Physics 112

Tuesday, December 19/17

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



<http://mvhs-sherrard.weebly.com/>



1. FA - Elastic Potential Energy
2. Demo - Popsicle Chain Reaction
Video - Pendulum
3. Examples - Conservation of Energy Problems - To Be Continued
4. Worksheets
5. SA - U3: S2&3 -> Thursday, Dec. 21/17

FA - Elastic Potential Energy

Dec. 19/17

An object attached to the end of a vertical spring causes it to stretch 3.0 cm. The spring gains 0.029 J of potential energy.

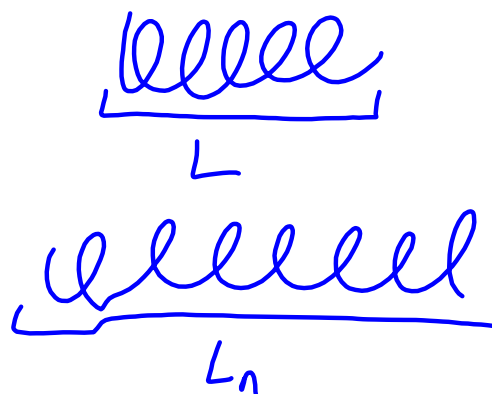
- a) What is the mass of the object?
 b) What is the magnitude and direction of the restoring force?



$$\begin{aligned}
 x &= 3.0 \text{ cm} = 0.030 \text{ m} \\
 E_e &= 0.029 \text{ J} \\
 a) \quad m &=? \\
 E_e &= \frac{1}{2} k x^2 \\
 k &= \frac{2 E_e}{x^2} \\
 k &= 64.4 \text{ N/m} \\
 F &= kx \\
 mg &= kx \\
 m &= 0.20 \text{ kg}
 \end{aligned}$$



$$\begin{aligned}
 F &= mg \\
 F &= (0.20)(9.80) \\
 F &= 2.0 \text{ N}
 \end{aligned}$$




$$x = L_n - L$$

Physics 122

Tuesday, December 19/17

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

<http://mvhs-sherrard.weebly.com/>

-
1. SA - U3 S1: Electrostatics - Wed 
MC/4 Prob
 2. Questions?
Worksheet - Textbook: C15, Page 708, #16-20
 3. Ohm's Law
 4. Worksheet - Textbook: C15, Page 714, #21-25
-
5. Power
 6. Worksheet - Textbook: Page 737, #40-42
Page 744, #46-50
 7. Series Circuits
 8. VIR Chart
 9. Textbook: Page 719, C15 - PP#27-31
 10. Parallel Circuits
 11. Textbook: Page 724, C15 - PP#32-35
 12. Combination/Complex Circuits
 13. Textbook: Page 728, C15 PP#36-37

Physics 122

SA - U3S1

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

Science 10

Tuesday, December 19/17

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

<http://mvhs-sherrard.weebly.com/>

1. Optional Assignment - Graphing Characters (max 2 -20 pts each)
- Submit before Christmas break.

2. SA - Physics #2

3. P5 - 100 Acre Wood Exercise

4. Velocity

5. Calculating Velocity

6. Resultant Displacement

7. Calculating Average Velocity

8. Worksheet: Constant and Average Velocity Problems

9. Position vs Time Graph

10. Worksheets: Position vs. Time Graphs

11. Velocity vs Time Graphs

12. Worksheet - Velocity vs Time Graphs

13. Acceleration

14. Comparing Directions of Velocity and Acceleration

15. Sample Problems -Acceleration