

Science 122

Monday, November 7/16

Midterm - Tuesday, Nov. 15/16

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



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Wednesday - Meeting

Thursday - Bus Supervision

1. Check -> Worksheet - Archimedes' Problems
Review - Hydrostatics

2. Summative Assessment - Hydrostatics
- Wed., Nov. 9

3. Hydrodynamics

4. Basic Types of Fluid Flow

5. Streamlines

6. Mass Flow Rates and Equation of Continuity

7. Volume Flow Rate

8. Worksheet - Equation of Continuity #50-55

9. Ideal Fluid Flow

10. Bernoulli's Equation

Hydrostatic Prob.

→ Pressure $P = \frac{F}{A}$

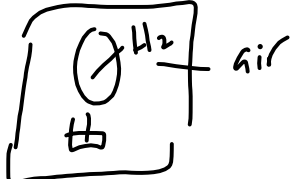
→ hydrostatic equation
(static fluid) $P_2 = P_1 + \rho g h$

→ Pascal's Principle
(enclosed fluid)
[hydraulic lift] $P_1 = P_2$
 $P_2 = P_1 + \rho g h$

→ Archimedes' Principle $F_B = \rho_f V_{sub} g$

% sub.
or visible. $\frac{V_{sub}}{V_0} = \frac{V_{displ}}{V_0} = \frac{\rho_0}{\rho_f}$

net $\vec{F} = 0$
(balloon) $+F_B - W_b - W_L = 0$



Apparent
Weight

$$W_{app} = W - F_B$$

Physics 112

Monday, November 7/16

Midterm - Wednesday, Nov. 9/16

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Wednesday - Meeting

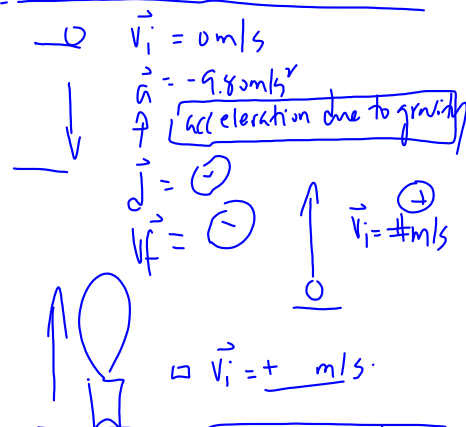
Thursday - Bus Supervision

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1. Conference Schedule
 2. Midterm - Questions?
 3. Newton's Third Law of Motion
 4. U2S3 - Introduction to Momentum
 5. Momentum
 6. Impulse
 7. Worksheet - C5 Page 200: PP #30-32
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Physics 112
Midterm Outline

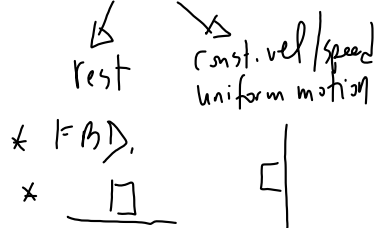
1. Find \vec{R} analytically. (rubric) reverses.
2. Answer questions re a velocity-time graph. \rightarrow max \vec{v}
3. Solve a freely falling body problem. max v .
4. Solve a first law problem.
5. Solve two second law problems

$\vec{a} = -2.0 \text{ m/s}^2$ $\left\{ \begin{array}{l} d, d \\ \text{ave speed} \\ \text{ave vel.} \\ \text{ave acc} \end{array} \right.$
 2.0 m/s^2



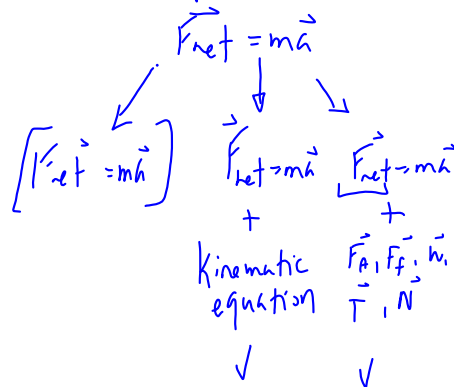
$v_f^2 = v_i^2 + 2ad$
 $v_f = \sqrt{v_i^2 + 2ad}$
 $v_f = v_i + at$
 $v_f = \pm$ the final vel
 $\text{WS} \Rightarrow \text{WS looks down}$

Newton's First Law



Newton's Second Law

* Acceleration
(speeding up / slowing down)



Physics 122

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Wednesday - Meeting

Thursday - Bus Supervision

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1. Return -> SA - U1 S3&4
 2. Midterm - Questions?
 3. Experiment 9.1 - Conservation of Momentum (Page 55)
- Due - Today, Nov. 7/16

4. Unit 2 - Section 1 - Projectiles

Science 10

Monday, November 7/16

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Wednesday - Meeting

Thursday - Bus Supervision

1. Check -> Worksheet - Metric Conversions - First Sheet

2. Physics - Quiz #1- Topics

- Wednesday, Nov. 9/16

3. Review Sheet for Quiz

4. Experiment: Measurement and Significant Digits

5. Physical Quantities

6. Graphing Basics

7. Distance vs Time Graph

Science 10
Physics - Quiz #1

1. definitions: physics, kinematics, linear motion, physical quantity, SI System, defining equation
2. base units of distance, time and mass
3. determine a measurement's number of significant digits
4. round measurements to a specified number of SDs
5. use the Certainty and Precision Rules
6. rearrange equations for a specified variable
7. perform metric conversions