April 29 - Professional Learning Day (Friday)

May 5 - NBTA Meetings (Thursday)

May 6 - NBTA Council Day (Friday)

May 23 - Victoria Day (Monday)

May 27 - Professional Learning Day (Friday)

Physics 112

Monday, April 18/16

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

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

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*Library Books

Explain That Stuff - April 22/16

Midterm - April 21/16 (Thursday)

1. Check -> Worksheet: C4 - Extra Practice - Weight and Friction
   Practice Problems (PP) - C4, Page 144: 5-7
   PFU: Page 151, #26-28, 30-32, 34

2. Formative Assessment: Newton's First Law

3. Newton's Second Law - Law of Force, Mass and Acceleration
   - To Be Continued

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4. Worksheet: Worksheet: C5 – Newton's Second Law

5. Worksheet: Text: Page 163, PP #1-3
   Text - Page 168 #4-7

P112

Midterm Topics.

-> find $\vec{R}$ analytically

-> velocity-time graph

WS -> kinematic problems (2)

WS -> freely falling body (1)

-> $\vec{v_i} = 0$ dropped

$\vec{v_i}$: ⊖ ↓ thrown

$\vec{v_i}$: ⊕ ↑ thrown

WS - Weight $\vec{w} = m\vec{g}$

WS - Newton's First Law prob. (1)

-> FBD (include)

object at rest

object constant vel.

* $\frac{km}{h} \xrightarrow{\div 3.6} \frac{m}{s}$ $\xleftarrow{\times 3.6}$

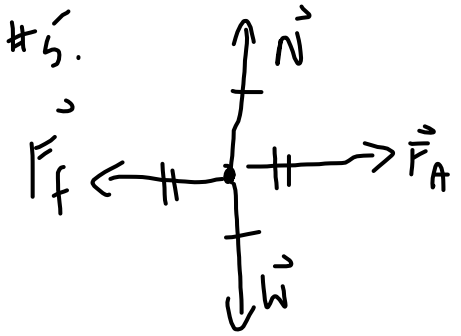
* g -> kg

* h -> min -> s.

*

Worksheet - C4.

#5.



$M = ?$

$\Rightarrow F_A = 45.8\,N$

$m = 13\,kg$

$W = mg$

$m = \frac{W}{g}$

$g = 9.8\,m/s^2$

Constant vel.

Newton's 1st L.

$F_A = F_f$ ✓

$N = W$ ✓

$\rightarrow F_f = \mu N$ ✓

$W = mg$ ✓

$F_f = \mu N$

$F_A = \mu N$

$F_A = \mu W$

$F_A = \mu mg$ ✓

$\mu = \frac{F_A}{mg}$

$\mu = \frac{N}{kg\,m/s^2}$

$\mu =$ no unit.

$\mu < 1$

WS

Formative Assessment - Newton's 1st

Apr. 18/16

You are pushing a wooden crate across a wood floor ($\mu = 0.20$) at a constant velocity. If you are exerting a force of 385N, what is the mass of the crate?

$g = 9.8 m/s^2$

$1.96 \times 10^2 kg \Rightarrow 2.0 \times 10^2 kg$

Science 122

Monday, April 18/16

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Midterm - April 28/16 (Thursday)

1. Return -> Test: Optics
2. Topic 4: Fluid Mechanics
3. Mass Density
4. Weight and Mass Density
5. Specific Gravity
6. Pressure
7. Pressure and Depth in a Static Fluid - To Be Continued

Science 10

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

Monday, April 18/16

1. Return and Review: Assignment - Distance vs Time Graphs

2. Worksheet: Distance, Time, Speed Practice Problems
   Worksheet: Understanding Concepts - Page 358: #3-6, 8
   *Page 358: #7, 9, 10

3. Types of Physical Quantities

4. Position

5. Displacement

6. Gecko Demo

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7. 100 Acre Wood

8. Worksheet: 100 Acre Wood -> Position and Displacement

9. Velocity

10. Representing Vector Quantities

11. Resultant (Final) Velocity

12. Average Velocity

Physics 122

Monday, April 18/16

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Explain That Stuff - April 22/16

Midterm - Tuesday - April 26

1. Experiment 10.2 - Torques (Page 67)
   Experiment 9.1 - Conservation of Momentum (Page 55)
   April 28/16

2. Text: Page 549, PP #13
   Page 570, Prob. #17, 19
   Worksheet: Projectiles - Problems

3. Formative Assessment: Projectile Fired at an Angle

4. U2 - S2 -> Circular Motion and Universal Law of Gravitation

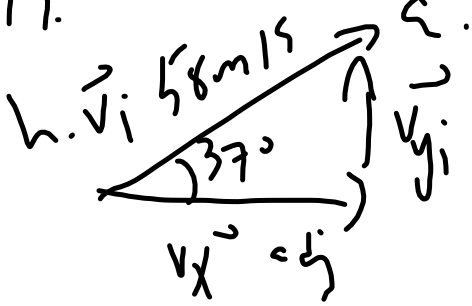
5. Uniform Circular Motion

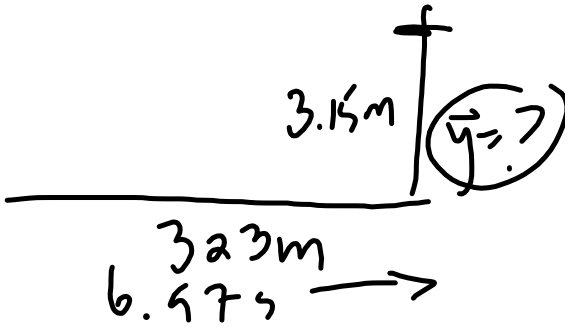
6. Horizontal Circular Motion - To Be Continued

7. Worksheet - Circular Motion

p. 570

#19.





$\vec{v}_x = +58\cos 37°$

$\vec{v}_{y_i} = +58\sin 37°$

horizontal	vert.
$\vec{v}_x = 58\cos 37°$	$\vec{a} = -9.8\,m/s^2$
$\vec{x} = 323m$	$\vec{y} = ?$
$t =$ ____	$t = 6.97s$
	$\vec{v}_{y_i} = 58\sin 37°$

$\vec{v}_x = \frac{\vec{x}}{t}$

$t = \frac{\vec{x}}{\vec{v}_x}$

$t = \frac{323}{58\cos 37°}$ ←

$t = 6.97s$

$\vec{y} = \vec{v}_{y_i} t + \frac{1}{2}\vec{a}t^2$

$\vec{y} = 58\sin 37°(6.97) + \frac{1}{2}(-9.8)(6.97)^2$

$\vec{y} = 5.2m$ ↓

Formative Assessment: Projectile Fired at an Angle

Monday, April 18/16

A bored kid, 30 meters from a building, throws a ball at an angle of 50^{o} with a velocity of 20 m/s at the building wall. At what height above the throwing level will the ball hit the wall?

9.0 m