April 13 - Report Cards Go Home (Wednesday)

April 14 - Parent-Teacher (Thursday - after school)

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
Wednesday, April 13/16

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*Library Books

Explain That Stuff - April 15/16

Midterm - April 21/16 (Thursday)

1. Assignment: U2-S1 -> Wednesday, April 13/16

2. Newton's First Law of Motion - The Law of Inertia

3. Example -> To Be Continued

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

Science 122
Wednesday, April 13/16

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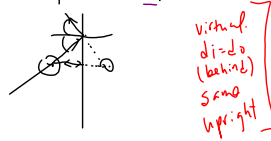## Midterm - April 28/16 (Thursday)

1. Check -> Red Text
   -> C18 - Page 381 - PP #14-16
       Page 383 - PP #17-19
       Page 387 - Review #1, 6, 9, 10, 12, 13
           Applying Concepts #3-8
           Problems #2, 4, 5, 7, 8, 9, 10, 13, 14

2. Lenses in Combination - Continue

3. Review - Optics

4. Test: Optics -> <u>Friday, Apr. 15/16</u>

§ 17.2 - Test · Optics

<u>Topics</u>

→ Ray diagram - plane mirror

virtual.
$d_i = d_o$
(behind)
same
upright

→ Spherical Mirrors

(1) Concave
  → converging
  → ray diagrams: principal axis

$+d_i$ R $-d_i$ virtual
par. ray
C F f
C F
O
I

$R = 2f$: 5 cases.

(2) convex F' c'
  diverging
  → ray diagram : same labels
  : 1 case.

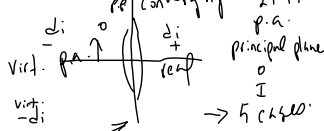→ Mirror Equation $\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$

  * sign conventions

d_o ⊕ +) −

d_i ⊕ − real
  ⊖ − virtual

f ⊕ − concave (conv)
  ⊖ − convex (div)

→ Magnification Formula

$m = \frac{h_i}{h_o} = \frac{-d_i}{d_o}$ h_i + upright
  h_i − inverted

  m ⊖ inverted
  m ⊕ upright

  $m = 1$ same
  $m < 1$ less than
  $m > 1$ greater than

→ Lenses n → index of refraction.
  shape

→ Lenses ① convex → ray diagrams
  ee converging 2F, F
  p.a.
  principal plane
  O
  I

$-d_i$ O $+d_i$
Virt. p.a. real
virt.
$-d_i$
O

→ 5 cases.

② concave → labels
  diverging. → 1 case.

2F F

→ Lens equation $\frac{1}{f} = \frac{1}{d_i} + \frac{1}{d_o}$.

d_i → ⊖ virtual
  → ⊕ real

d_o → ⊕

f → ⊕ convex $+d_o$
  ⊖ concave
  $+d_i$

→ Magnification Eq.

$m = \frac{h_i}{h_o} = \frac{-d_i}{d_o}$ Format
  → Ray D.
  → Prob.

→ Double Lenses.

Science 10

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Wednesday, April 13/16

1. Activity - Tumble Buggies -> Results

2. Check -> Worksheet - Distance vs Time Graphs

3. Assignment - Distance vs Time Graphs
   - Friday, April 15/16

4. Problem Solving Strategy

5. Average Speed - Sample Problems -> To Be Continued

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

7. Types of Physical Quantities

8. Position and Displacement

Topics: Assignment - Distance vs Time Graphs

1. plot points in four quadrants

2. write the coordinates of a plotted point

3. record rise and run of a line

4. use rise and run to determine slope of a line

$$m = \frac{rise}{run}$$

5. use the slope formula to determine the slope of a line

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

6. answer questions for a given distance-time graph

7. type of motion: uniform motion - constant speed

Physics 122

Wednesday, April 13/16

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Explain That Stuff - April 15/16

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

2. Check -> Worksheet -> Text: Page 536, PP #1-8

3. Formative Assessment - Horizontal Projectile

4. Projectiles Fired at An Angle - To Be Continued

Formative Assessment - Horizontal Projectile

A rifle is fired horizontally and travels 200.0 m [E]. The rifle barrel is 1.90 m from the ground. What speed must the bullet have le the gun barrel?　　　[321 m/s]