Tuesday, May 5/15
Science 122

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

1. Test: Nuclear Physics
2. Example: Iron Ring and Rod
3. Expansion in Two and Three Dimensions
4. Cutnell - Chapter 12, Page 366: #9, 11-13, 15, 17, 19 -> HW
5. Reminders: STP and SATP
6. Macroscopic Description of Gases
7. Boyle's Law
8. Charles's Law
9. Combined Gas Law
10. Ideal Gas Law

---

11. Cutnell - 412: #9-11, 13, 15, 16, 18

Tuesday, May 5/15
Physics 122

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

1. Rewrite -> Quiz U2-S2: IS Wednesday or Thursday

2. Test: Unit 2 - Monday, May 11/15

3 Questions?
Example: Mass on a Spring
Text: Page 608, #1-4
Page 623, #23-27, 30
Text: Page 614, #5-8
Page 623, #28, 29
Worksheet - SHM -> Optional

4. Unit 3 - Types of Fields, Charges and Circuits

5. Electrostatics

6. Electrical Nature of Matter

7. Transfer of Charge

8. Law of Conservation of Electric Charge

9. Charging by Conduction

10. Charging by Induction

Tuesday, May 5/15
Science 10

Meeting - 3:30

1. Experiment - Measurements and Significant Digits
   - 4 Days Late Today

2. Chemistry Task Sheet - 4 Days Late

3. Quiz: Wednesday -> SD, Certainty Rule, Precision Rule, Rearranging Equations and Metric Conversions

4. Activity: Tumble Buggies -> Excel Graphs

5. Average Speed Equation and Word Problems - Continue

6. Matching a Graph to a Story

---

7. Worksheet: Matching a Graph to a Story
   Understanding Concepts - Page 358: #3-6, 8

8. Types of Physical Quantities

9. Direction

10. Position and Displacement

Page 355

7.3 km/h

Sample Problem 1

Eiko skates to school, a total distance of 4.5 km (Figure 2). She has to slow down twice to cross busy streets, but overall the journey takes her 0.62 h. What is Eiko's average speed during the trip?

$V_{av} = ?$

$d = 4.5\ km$

$t = 0.62\ h$ } ①

$V_{av} = \frac{d}{t}$ ①

2 SD

$V_{av} = \frac{4.5\ km}{0.62\ h}$ ①

2 SD

$V_{av} = 7.3\ \frac{km}{h}$ ①

Her average speed was $7.3\ \frac{km}{h}$. ①

Page 356

2.3 h

Sample Problem 3

Kira is trying to predict the time required to ride her bike to the nearby beach. She knows that the distance is 45 km and, from other trips, that she can usually average about 20 km/h, including slowing down for climbing hills. Predict how long the trip will take.

$V_{av} = 20\ km/h$ ①

$d = 45\ km$

$t = ?$

$\frac{V_{av}}{1} = \frac{d}{t}$ ①

$V_{av}\,t = d$

$t = \frac{d}{V_{av}}$ ①

$t = \frac{45\ km}{20\ \frac{km}{h}}$ ① 2 SD. 2 SD

$t = 2.3\ h$ ①

$\frac{\frac{km}{1}}{\frac{km}{h}} = \frac{km}{1} \times \frac{h}{km}$

It will take 2.3 h. ①

Page 356

92 km/h

Sample Problem 2

Imagine that you are riding on the Cariboo Dayliner, in the dome car of course (**Figure 3**), and you see a sign that reads 120 km. You decide, after seeing several such signs, that you are going to measure the elapsed time between the next two signs, which are 10 km apart. You read the elapsed time as 390.6 s. Determine the speed of the train in kilometres per hour during the elapsed time.

Figure 3
The Cariboo Dayliner yields a scenic view of Canada.

$V_{av} = ?$

① $d = 10\,km$

$t = 390.6\,s \times \frac{1\,h}{3600\,s} = 0.1085\,h$ ①

$V_{av} = \frac{d}{t}$ ① 2 SD.

$V_{av} = \frac{10\,km}{0.1085\,h}$ 4 SD. ①

$V_{av} = 92\,\frac{km}{h}$ ① 2 SD.

① The speed is 92 km/h.

Page 357

11 km

Sample Problem 4

Janna has a summer job helping with bison research (Figure 4). She notes that they graze (move and eat grass) at an average speed of about 110 m/h for about 7.0 h/d. What distance, in kilometres, will the herd travel in two weeks (14 d)?

$v_{av} = 110\ \frac{m}{h}$

$d = ?\ (km)$

$t = 7.0\ h \times 14 = 98\ h$ } ①

$v_{av} = \frac{d}{t}$ ①

$d = v_{av} t$ ①

$d = \left(110\ \frac{m}{h}\right)(98\ h)$ ①

$d = 10780\ m$ ①

$10708\ m \times \frac{1\ km}{1000\ m}$

$d = 10.780\ km$

$d = 11\ km$ ①

The herd will travel 11km. ①