Physics 112

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

Tuesday, April 23/19

---

1. Return -> SA - U2: S1&2

2. Questions?
   Worksheet: C5 - Momentum, Page 197: PP #29
   C5 - Impulse Page 200: PP #30-32

3. FA - Momentum
   FA - Impulse
   } Tomorrow

4. Impulse-Momentum Theorem

5. Worksheet - Textbook: Page 203, PP #33-35
   Textbook: Page 209, #37-45

---

6. MC - Momentum, Impulse and Impulse-Momentum Theorem

7. Worksheet - Extra Momentum, Impulse, Etc.

Physics 122

Tuesday, April 23/19

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

1. Questions?
   Series Circuits -> Worksheet: Practice Problems
   Parallel Circuits -> Worksheet: Practice Problems
   Combination/Complex Circuits -> Worksheet: Practice Problems
   Circuit #1 and #2

2. SA - Electric Circuits - Date: Thursday, April 24/19

3. Worksheet - Circular Motion

4. Unbanked Curves and Centripetal Force

5. Banked Curves and Centripetal Force

6. Worksheet - Unbanked and Banked Curve Problems

Science 122

Tuesday, April 23/19

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

1. SA - Nuclear Physics -> Date: Tuesday, April 30/19
2. Electrochemistry
3. Reduction Reactions and Reducing Agents
4. Oxidation Reactions and Oxidizing Agents
5. Redox Reactions
6. Spontaneous Reactions
7. Generalizations: Oxidizing Agents and Reducing Agents
8. Table of Redox Half Reactions
9. Building Tables of Redox Half Reactions
10. Worksheet - #63
11. 5 Steps for Predicting Redox Reactions

12. Worksheet - #64

Science 10

Tuesday, April 23/19

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

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

1. SA - Chemistry #3
   - Date: Wednesday, April 24/19
2. Check -> Review SA - Chemistry #3
3. ABC Brainstorming: Chemistry Unit

---

4. Next Unit: Physics
5. Physics
6. Linear Motion
7. Physical Quantities
8. SI System of Units -> Fundamental/Base Units
   -> Derived Units
9. Scientific Notation
10. Certainty and Significant Digits
11. Rule for Counting SDs
12. Exact and Defined Values
13. Rounding Values
14. Worksheet – Counting Significant Digits and Rounding
15. Certainty Rule for Multiplying and Dividing Measurements
16. Precision Rule for Adding and Subtracting Measurements
17. Worksheet – Certainty and Precision Rules

Science 10
Review – SA: Chemistry #3
(April 2019)

(Value - 15)

Part 1 – Multiple Choice
Print the letter of the best answer on the line provided.

___ 1. What is the correct name for the N^{3-} ion?
a) nitrogen ion
b) nitrate ion
c) nitride ion
d) nitrite ion

___ 2. Which of the following compounds contains the lead (II) ion?
a) Pb_2O
b) PbO
c) Pb_2S
d) $PbCl_4$

$Pb^{2+} O^{-2} \rightarrow PbO$

___ 3. Which is true about the composition of ionic compounds?
a) They are composed of cations and anions.
b) They are formed from two or more nonmetallic ions.
c) They are composed of only anions.
d) They are composed of only cations.

___ 4. Which of the following is the correct name for N_2O_5?
a) nitrous oxide
b) pentanitrogen dioxide
c) nitrate oxide
d) dinitrogen pentoxide

nm

ionic cpd.
+ | −
metal ← NH_4^+

___ 5. Which of the following formulas represents an ionic compound?
a) CS_2
b) PCl_3
c) N_2O_4
d) BaI_2

molecular
Ba - metal

___ 6. Molecular compounds are usually
a) composed of two nonmetals.
b) composed of positive and negative ions.
c) composed of a metal and a nonmetal.
d) composed of two or more transition metals.

$C_1 S_2$
nm nm
$P Cl_3$
nm nm

B 7. Which of the following shows a prefix used in binary molecular compounds with its corresponding number?
a) hexa – 8
b) nona – 9
c) di - 7
d) penta - 3

D 8. Given, $2Ca + O_2 \rightarrow 2CaO$, what is the 2 located in front of calcium called?
a) subscript
b) product
c) reactant
d) coefficient

C 9. A formation reaction can be compared to:
a) two dancing couples switching partners
b) a person "cutting in" on a dancing couple
c) two single people joining for a dance
d) a couple breaking up

A 10. The substances to the right of the arrow in a chemical reaction are called
a) products
b) coefficients
c) subscripts
d) reactants

4 11. If you rewrite the following word equation as a balanced chemical equation, what will the coefficient and symbol for iodine be?

bromine + potassium iodide -> potassium bromide + iodine

1. $2I^-$
2. I
3. 2I
4. I_2

C 12. What does the symbol → in a chemical equation mean?
a) heat is supplied to the reaction
b) a catalyst is needed
c) yields
d) precipitate

C 13. Chemical equations must be balanced to satisfy the _____.
a) Law of Definite Proportions
b) Law of Multiple Proportions
c) Law of Conservation of Mass
d) Principle of Avogadro

A 14. In every balanced chemical equation, each side of the equation has the same number of _____.
a) atoms
b) molecules
c) coefficients
d) subscripts

D ICPD → elements

A 15. Which of the following is NOT true concerning the decomposition of a simple binary compound?
a) The products are unpredictable.
b) Two or more products will be produced.
c) The reactant is a single substance.
d) The reactant could be an ionic or a molecular compound.

$MgF_2 \rightarrow Mg + F_2$

Part 2 – Reaction Types

a) Identify each type of chemical reaction by printing F for formation, D for decomposition, SR for single replacement, DR for double replacement, or C for combustion on the line provided.

b) Balance each reaction.

SR $2\ Cr + 3\ Fe(NO_3)_2 \rightarrow 3\ Fe + 2\ Cr(NO_3)_3$ (3 cpd, 2 ele)

F $4\ Sc + 3\ O_2 \rightarrow 2\ Sc_2O_3$ (4 ele, 3 ele, 2 cpd)

DR $2\ Al(OH)_3 + 3\ H_2CO_3 \rightarrow Al_2(CO_3)_3 + 6\ H_2O$ (3 cpd.)

SR → C $C_9H_{20} + 14\ O_2 \rightarrow 9\ CO_2 + 10\ H_2O$ (1 cpd, 14 ele)

D $Ag_2Te \rightarrow 2\ Ag + Te$

DR $Mg(BrO_3)_2 + 2\ KSCN \rightarrow Mg(SCN)_2 + 2\ KBrO_3$ (1 cpd., 2 cpd)

C* $2\ C_6H_{14} + 19\ O_2 \rightarrow 12\ CO_2 + 14\ H_2O$ (1 cpd)

DR $Sc_2(SO_4)_3 + 3\ CaI_2 \rightarrow 2\ ScI_3 + 3\ CaSO_4$

1. $2\ Cr + 3\ Fe(NO_3)_2 + 3\ Fe + 2\ Cr(NO_3)_3$ (1 cpd, 3 cpd)

Reactants	Products
Cr = 1 x 2 = 2	Cr = 1 x 2 = 2
Fe = 1 x 3 = 3	Fe = 1 x 3 = 3
* NO_3 = 2 x 3 = 6	NO_3 = 3 x 2 = 6

Name of Compound	Formula of Compound	
silver phosphide	Ag_3P	I
bismuth (V) sulfate	$Bi_2(SO_4)_5$	I
ammonium selenide	$(NH_4)_2Se$	I
molecular fluorine	F_2	M
nitrogen tri iodide	NI_3	M
zinc chloride	$ZnCl_2$	I
diselenium hexasulfide	Se_2S_6	M
barium borate	$Ba_3(BO_3)_2$	I
tetrabromine octochloride	Br_4Cl_8	M
pentaphosphorus decoxide	P_5O_{10}	M
manganese (IV) carbonate	$Mn(CO_3)_2$	I
~~diphosphorus~~ molecular phosphorus	P_4	M
iron (III) arsenide	$FeAs$	I
molecular bromine	Br_2	M

Have No Fear of Ice Cold Broccoli.

H_2 N_2 F_2 O_2 I_2 Cl_2 Br_2

P_4 S_8

Part 4 – Translating Word Equations and Sentences to Balanced Chemical Equations
Use the following word equations and sentences to write balanced chemical equations.

1. aluminum metal + sulfur ⟶ aluminum sulfide

$-Al + -S_8 \rightarrow \_\_ Al_2S_3$ (4)

2. tetracarbon decahydride + oxygen ⟶ carbon dioxide + water

3. Barium metal reacts with nickel (III) fluoride to produce barium fluoride and nickel metal.

4. Niobium (V) iodide yields niobium metal and iodine.

5. Hydrogen bromide combines with calcium hydroxide to produce calcium bromide and water.