

Physics 112

Monday, March 25/19

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1. Submit/Return:

FA - Uniformly Accelerated Motion (K3.8)

FA - Uniformly Accelerated Motion (K3.9)

FA - Uniformly Accelerated Motion (K3.10)

FA - Uniformly Accelerated Motion (K3.11)

2. Acceleration Due To Gravity

3. The Rock

4. Freely Falling Bodies

5. Worksheet - Objects in Free Fall

6. SA: U1- S3 -> Mathematical Analysis

-> Topics (See Next Page)

-> Format: Problems Only

-> Date: Friday, March 29/19

7. FA - Uniformly Accelerated Motion (K3.14)

8. Worksheet -Extra - Uniformly Accelerated Motion Problems

SA: U1- S3 -> Topics

1. types of motion - uniform motion and uniformly accelerated motion
2. use the relationship between the directions of velocity and acceleration to determine the motion of an object
3. word problems - solve using checklist to obtain full value
 - uniform motion - 1 formula
 - uniformly accelerated motion - 4 formulas
 - quadratic formula
4. acceleration due to gravity - influenced by mass of planet and distance from planet
 - symbol -> \vec{g}
 - on Earth $\vec{g} = -9.80 \text{ m/s}^2$
 - assume no air resistance when working with freely falling bodies



Physics 122

Friday, March 25/19

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1. Submit FAs and/or Justifications and LCs
 - FA - Rel. Velocity (RV3.1) - Parallel Directions
 - FA - Rel. Velocity (RV3.2) - Perpendicular Directions: Boat
 - FA - Rel. Velocity (RV3.3) - Perpendicular Directions: Intersection
 - FA - 1D Explosion
 - FA - 1D Collision
 - FA - Type of 1D Collision
 - FA - 2D Collision
 - FA - 2D Explosion } Do at least one.
FA - Relative Velocity and Collisions/Explosions - Optional
 2. SA - U1: S3&4 (Relative Velocity and Collisions/explosions)
 - Date: Thursday, March 28/19
 - Format: Problems Only
 - Relative Velocity (// Velocities)
 - Relative Velocity (Perp. Velocities: Boat or Plane)
 - Relative Velocity (Perp. Velocities: Intersection)
 - 1D Collision and Type
 - 2D Collision
 - 2D Explosion
-
3. Unit 3 - Electrostatics and Electric Circuits
 4. Unit 3 - Section 1 - Electrostatics
 5. Electrostatics
 6. Types of Charge
 7. Elementary Charge
 8. Transfer of Charge
 9. Law of Conservation of Electric Charge
 10. Electrostatic Force
 11. Coulomb's Law
 12. Worksheet: Charge and Coulomb's Law
Textbook: Page 638, #1-5

Science 122

Monday, March 25/19

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

1. SA - Hydrostatics

Date: Tuesday, March 26/19

Format: Problems Only

-> $P = F/A$ -> $P_2 = P_1 + \rho gh$ (2 or more equations)

-> % of an object visible/submerged

-> Pascal's Problem - Hydraulic Problem

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

-> Net Force Problem

* density and specific gravity

2. Questions?

Worksheet - Equation of Continuity and Bernoulli's Principle
(Problems #50-55, #56-59)

3. Worksheet: Problems - Continuity and Bernoulli's Equation

Worksheet: Fluids - Continuity and Bernoulli: Extra Practice #2

4. Next Topic - Nuclear Physics

5. Review - Atoms

6. Isotopes

7. Hydrogen Isotopes

8. Radioactive Decay

9. Radioactive Isotopes and Uses

10. Alpha Decay

11. Beta Decay

12. Gamma Decay

Science 10

Monday, March 25/19

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1. FA - Mixed Ionic Compounds
FA - Molecular Compounds
 2. Practice: Mixed Ionic/Covalent Compound Naming #1
Review - Naming Chemical Compounds #2
 3. SA - Chemistry #2 (Atomes, Ions and Compounds)
- Topics (See Next Page)
- Earliest Date: Wednesday, March 27/19
 4. Review: SA Chemistry #2
-
5. Counting Atoms
 6. Worksheet: Counting Atoms in Compounds
 7. Chemical Reactions
 8. Video - Chemical Curiosities
 9. Word Equations
 10. Chemical Equations
 11. Law of Conservation of Mass
 12. Examples - Balancing Chemical Equations

Topics: SA - Chem #2

H

1. atoms -> electrically neutral: $\#p^+ = \#e^-$ ← atomic #
2. chemical names and symbols: elements and ions
3. periodic table of the elements: location of metals, nonmetals and metalloids
4. atomic number = number of protons
5. draw a Bohr-Rutherford diagram for an atom of an element
6. ions - atoms that have gained or lost electrons
 - cations/positive ions/metallic ions
 - anions/negative ions/nonmetallic ions
 - ~~be able to state~~ number of protons, number of electrons and ion charges
7. draw a Bohr-Rutherford diagram for an ion of an element
8. ionic bond - created by transfer of electrons
9. be able to identify monatomic ions, polyatomic ions and ions of multivalent metals
10. ionic compounds - electrically neutral
11. be able to write the names of simple binary ionic compounds given their formulas and vice versa
12. be able to write the names of ionic compounds containing polyatomic ions given their formulas and vice versa
13. know roman numerals 1-10
14. be able to write the names of ionic compounds containing multivalent metals given their formulas and vice versa
15. be able to write the names of ionic compounds containing multivalent metals and polyatomic ions given their formulas and vice versa
16. covalent bond - created as a result of the sharing of electron pairs
17. molecular compounds = covalent compounds = molecules
18. prefixes 1-10
19. homonuclear molecules: $H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2$ ← (7)
20. special molecules: P_4, S_8 , water, ammonia, hydrogen peroxide
21. be able to write the names of binary molecular compounds given their formulas and vice versa
22. identify ionic compounds and molecular compounds

Science 10

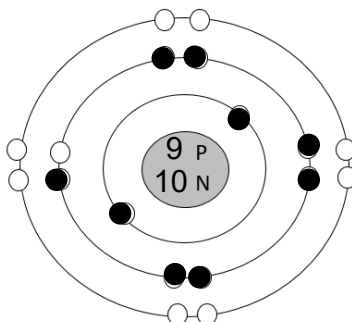
Review for SA: Chem #2 - Atoms to Compounds

1. Complete the table below. Read the headers carefully.

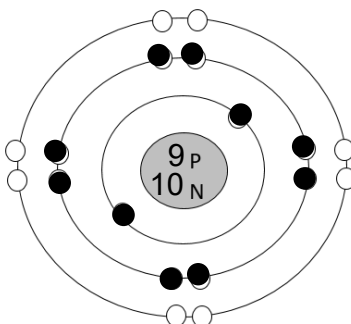
Element Name	Element Symbol	Atomic Number	Number of Protons	Number of Electrons in the Atom	Ion Name	Ion Symbol	Number of Electrons in the Ion
neon	Ne	10	10	10			
cadmium	Cd	48	48	48	cadmium ion	Cd^{2+}	46
phosphorus	P	15	15	15	phosphide ion	P^{3-}	18

2. a) Is fluorine a metal, nonmetal or metalloid? nonmetal

b) Draw the Bohr-Rutherford diagram for an atom of fluorine. The mass number of fluorine is 19.



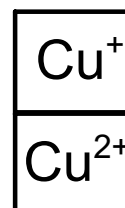
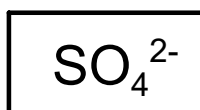
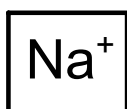
c) Draw the Bohr-Rutherford diagram for an ion of fluorine.



d) Is the ion of fluorine a cation or anion? anion

3. Identify each of the following as a monatomic ion (MI), a polyatomic ion (PI), or the ion of a multivalent metal (IMM), by printing MI, PI or IMM on the line provided.

- | | | | | | |
|---------------------|-------|---------------------|-------|------------------|-------|
| a) NH_4^+ | _____ | d) cyanate ion | _____ | g) iron (II) ion | _____ |
| b) Ge^{4+} | _____ | e) Bi^{3+} | _____ | h) arsenide ion | _____ |
| c) Br^{-1} | _____ | f) Ca^{2+} | _____ | i) peroxide ion | _____ |



4. Identify each compound as ionic or molecular.

- a) P_2O_5 _____
- b) barium nitride _____
- c) ammonium fluoride _____
- d) sulfur trioxide _____
- e) $Ca_3(PO_4)_2$ _____

5. State the name of each compound. This list includes ionic and molecular compounds.

- a) P_4H_{10} _____
- b) Ag_2S _____
- c) TiN _____
- d) Br_3O_8 _____
- e) $Al(CN)_3$ _____
- f) $Sn_3(AsO_3)_2$ _____
- g) S_8 _____

6. Write the formula for each chemical compound. This list includes ionic and molecular compounds.

- a) strontium oxide _____
- b) iodine heptafluoride _____
- c) aluminum thiosulfate _____
- d) chlorine _____
- e) antimony (V) phosphide _____
- f) pentaboron nonahydride _____
- g) europium (III) orthosilicate _____

7. Covalent bonds are formed when electron pairs are _____. Ionic bonds are formed when electrons are _____.

8. Atoms and ionic compounds are electrically _____. Ions are electrically _____.