

Name _____ Period _____ Date _____
Pre AP Chemistry

Chapter 3 Review—Worksheet #3

I. Calculate the number of protons, neutrons, and electrons in each isotope.

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|---------------|--------------|-------------------------|---------------------------|--------------------|
| 1. Iodine-126 | 2. Cobalt-60 | 3. $^{15}\text{N}^{-3}$ | 4. $^{137}\text{Ba}^{+2}$ | 5. ^{39}K |
| $p^+ =$ | $p^+ =$ | $p^+ =$ | $p^+ =$ | $p^+ =$ |
| $n^0 =$ | $n^0 =$ | $n^0 =$ | $n^0 =$ | $n^0 =$ |
| $e^- =$ | $e^- =$ | $e^- =$ | $e^- =$ | $e^- =$ |

II. Write the hyphen notation and the nuclear symbol with the following information. Identify each as a cation, an anion, or a neutral atom.

- | | | | |
|--|---|---|--|
| 1. $p^+ = 9$
$n^0 = 10$
$e^- = 10$ | 2. $p^+ = 20$
$n^0 = 21$
$e^- = 20$ | 3. $p^+ = 38$
$n^0 = 50$
$e^- = 36$ | 4. $p^+ = 86$
$n^0 = 136$
$e^- = 86$ |
|--|---|---|--|

III. Average atomic mass

1. In order to calculate the average atomic mass for an element, what two things must you know about your isotopes for that element?

2. Tests count 70% of your grade and your test average is 98. Homework counts 30% of your grade and your homework average is 20. Will your final average be closer to 98 or 20? Explain?

3. Calculate the average atomic mass for carbon using the following information.

Isotope	Percent abundance	Atomic mass
Carbon-12	98.90%	12 amu
Carbon-13	1.10%	13.003355 amu