Revised August 2011

HONORS WORKSHEET 2b: ANSWERS

1.

- Elements are made from tiny particles called atoms.
- All atoms of a given element are identical. (**N.B. see *isotopes* below**).
- The atoms of a given element are different to those of any other element.
- Atoms of different elements combine to form compounds. A given compound always has the same relative numbers and types of atoms. (Law of constant composition).
- Atoms cannot be created or destroyed in a chemical reaction they are simply rearranged to form new compounds. (Law of conservation of mass).

2.

(a) 53
(b) 53
(c) 0
(d) 73
(e) It's an isotope. Same # of protons, different number of neutrons (mass number)

3.

(a) $^{7}N_{15}$
(b) $^{35}Br_{81}$
(c) $^{28}Ni_{58}$
(d) $^{23}V_{46}$

4.

30.97376 = [(30*X) + (32*(100-X))]/100

X = 51.3, i.e., 51.3% P^{30} and 48.7% P^{32}