

1.	Compd	mass Na	mass O	$\frac{\text{mass O}}{\text{mass Na}}$	Ratio
	#1	46 g	16 g	0.348	1
	#2	46 g	32 g	0.696	2

The ratio of $\frac{\text{mass of O}}{\text{mass of Na}}$ for compound #1 : #2 remains a whole number of 1 : 2

2.		Rel. electric charge	mass (amu)	mass	Symbol
	electron	-1	(0)	9.1×10^{-28} g	(e^-)
	proton	(+1)	1	1.7×10^{-24}	p^+
	neutron	(0)	(1)	1.7×10^{-24}	(n)

3. See Dr. Song's Lecture note in his lecture.
Also see sec. 5.3 (p117-118, Text) for explanation.

4. proton & neutron

5. Carbon, ${}^{12}_6\text{C}$

6. Atoms of the same element that have different masses due to different no. of neutrons.

7. ${}^1_1\text{H}$, ${}^2_1\text{H}$, ${}^3_1\text{H}$

8. ${}^{235}_{92}\text{U}$ contains 92 p^+ & 143 n

${}^{238}_{92}\text{U}$ " 92 p^+ & 146 n

9.	At. No.	# of p^+	# of e^-	# of n	Mass No	Nuclear Symbol
	20	(20)	(20)	(20)	40	(${}^{40}_{20}\text{Ca}$)
	(35)	35	(35)	46	(81)	(${}^{81}_{35}\text{Br}$)

HW (Atomic Theory) Solution:

p2.

10. $12.00 \times 2.42 = \boxed{29.0 \text{ amu}}$

11. (a) ${}^{44}_{20}\text{Ca}$
 (b) ${}^{211}_{86}\text{Rn}$
 (c) ${}^{110}_{47}\text{Ag}$
 (d) ${}^{10}_{4}\text{Be}$

12. $\boxed{32.07 \text{ amu}}$

13. $(58.0 \times 0.750) + (60.0 \times 0.250) = \boxed{58.5 \text{ amu}}$

14. Because ${}^6_3\text{Li}$ and ${}^7_3\text{Li}$ isotopes are not equally abundant.

15. (a) neutron
 (b) proton
 (c) electron
 (d) proton

5.17 (p131)

~~37.07~~ $(184.9530 \times 0.3707) + (186.9560 \times 0.6293)$
 $= \boxed{186.2 \text{ amu}}$

Probably $\boxed{\text{Re}}$