

Name: _____

Period: ____ Subject: _____

Date: _____

Isotopes and Ions Worksheet: Electrons, Protons and Neutrons...Oh, My!!

element	symbol	# protons	# electrons	# neutrons	charge
1. Calcium	Ca	20	20	20	0
2. Bromine	Br	35	35	45	0
3. Sodium ion	Na ⁺	11	10	12	+1
4. Oxide ion	O ⁻²	8	10	8	-2
5. Fluoride ion	F ⁻	9	10	10	-1
6. Uranium-234	${}_{92}^{234}\text{U}$	92	92	142	0
7. Carbon-14	${}_{6}^{14}\text{C}$	6	6	8	0
8. Barium-135	${}_{56}^{135}\text{Ba}$	56	56	79	0
9. Iron-54	${}_{26}^{54}\text{Fe}$	26	26	28	0
10. Titanium-46	${}_{22}^{46}\text{Ti}$	22	22	24	0

For each of the following elements, calculate the average mass to two decimal places:

11. 10.80 amu Boron: 20% Boron-10, 80% Boron-11

12. 47.92 amu Titanium: 8.25% Titanium-46, 7.44% Titanium-47, 73.72% Titanium-48, 5.41% Titanium-49, 5.18% Titanium-50

13. 24.32 amu Magnesium: 79% Magnesium-24, 10% Magnesium-25, 11% Magnesium-26

14. 12.01 amu Carbon: 98.89% Carbon-12, 1.11% Carbon-13

15. 35.48 amu Chlorine: 75.77% Chlorine-35, 24.23% Chlorine-37