

Name: Key

Subatomic Particle Practice

- How are the **atomic number** and the **number of protons** related to each other? they are the same
- How do the **number of protons**, **number of neutrons**, and the **mass number** relate to each other?

$$\# \text{ protons} + \# \text{ neutrons} = \text{mass \#}$$

- What is the **one thing** that determines the identity of an atom? # of protons
- Fill in the missing values for the chart below:

these columns should all be the same

↓                      ↓                      ↓                      ↓

Element Name	Atomic Number	Number of Protons	Number of Neutrons	Number of Electrons	Mass Number <i>protons + neutrons</i>	Nuclear Charge	Nuclear Symbol
carbon	6	6	6	6	12	+6	$^{12}_6\text{C}$
Oxygen	8	8	8	8	16	+8	$^{16}_8\text{O}$
hydrogen	1	1	0	1	1	+1	$^1_1\text{H}$
Carbon	6	6	8	6	14	+6	$^{14}_6\text{C}$
hydrogen	1	1	2	1	3	+1	$^3_1\text{H}$
nitrogen	7	7	7	7	14	+7	$^{14}_7\text{N}$
hydrogen	1	1	1	1	2	+1	$^2_1\text{H}$
uranium	92	92	146	92	238	+92	$^{238}_{92}\text{U}$
cesium	55	55	82	55	137	+55	$^{137}_{55}\text{Cs}$
Sodium	11	11	12	11	23	+11	$^{23}_{11}\text{Na}$
silver	47	47	61	47	108	+47	$^{108}_{47}\text{Ag}$
tungsten	74	74	110	74	184	+74	$^{184}_{74}\text{W}$
bronine	35	35	45	35	80	+35	$^{80}_{35}\text{Br}$
chromium	24	24	28	24	52	+24	$^{52}_{24}\text{Cr}$
silver	47	47	60	47	107	+47	$^{107}_{47}\text{Ag}$
osmium	76	76	114	76	190	+76	$^{190}_{76}\text{Os}$