

NAME: _____ DATE: _____

6.4 c Periodic Table of Elements

Directions: Use the the periodic table to fill in the below chart.

	Element	Symbol	Atomic Number	# of protons	# of electrons	Atomic Mass (Weight)	Rounded Atomic Mass	(show work) # of Neutrons	Period	# of Energy levels
1	Oxygen	O	8	8	8	15.999	16	$16 - 8 = \underline{8}$	2	2
2	Helium	He	2	2	2	4.003	4	$4 - 2 = 2$	1	1
3	Carbon	C	6	6	6	12.01	12	$12 - 6 = 6$	2	2
4	Aluminum	Al	13	13	13	26.98	27	$27 - 13 = 14$	3	3
5	Calcium	Ca	20	20	20	40.08	40	$40 - 20 = 20$	4	4
6	Sodium	Na	11	11	11	22.99	23	$23 - 11 = 12$	3	3
7	Potassium	K	19	19	19	39.1	39	$39 - 19 = 20$	4	4
8	Nitrogen	N	7	7	7	14.01	14	$14 - 7 = 7$	4	4
9	Silicon	Si	14	14	14	28.09	28	$28 - 14 = 14$	2	2
10	Iron	Fe	26	26	26	55.85	56	$56 - 26 = 30$	3	3
11	Hydrogen	H	1	1	1	1.008	1	$1 - 1 = 0$	1	1

This violates Hund's rule. One electron is distributed to each of the 2p orbitals before doubly filling any.

write the name and symbol for the elements with the following orbital diagrams.

The image shows several orbital diagrams for elements. The first diagram shows a configuration where one orbital in a subshell has two electrons while others are empty, with a note that this violates Hund's rule. Other diagrams show configurations for elements like Nitrogen (1s² 2s² 2p³), Oxygen (1s² 2s² 2p⁴), and others, with arrows indicating the filling order and Hund's rule.