

Name: \_\_\_\_\_

Block: \_\_\_\_\_

Date: \_\_\_\_\_

Science 10

**4.1 - Subatomic Particles**

Assignment

1) Use your periodic table to help you fill in the chart below:

Element Name	Atomic #	Mass #	# of Protons	# of Neutrons	# of Electrons in an ATOM	Ion Symbol and Charge	# of Electrons in the ION
a) potassium	19			20		$K^+$	
b) phosphorus		31			15		
c)	3	7					2
d)		40				$Ca^{2+}$	
e) nitrogen				7			10
f)		5		3		N/A	N/A
g) argon		40					
h)	13			13			10
i) chlorine				20			18
j)			53	74			

2) Why don't elements "f" and "g" in question #1 form ions?

\_\_\_\_\_

\_\_\_\_\_

3) How many neutrons are in the following atoms:

- a. Carbon-13 \_\_\_\_\_
- b. Chromium-51 \_\_\_\_\_
- c. Strontium-88 \_\_\_\_\_
- d. Boron-10 \_\_\_\_\_

4) How many protons are in each of the following atoms/ions:

- a.  $Li^+$  \_\_\_\_\_
- b. Si \_\_\_\_\_
- c.  $S^{2-}$  \_\_\_\_\_
- d. Neon \_\_\_\_\_

5) How many electrons are in each of the following atoms/ions:

- a.  $Li^+$  \_\_\_\_\_
- b. Se \_\_\_\_\_
- c. Barium atom \_\_\_\_\_
- d. Magnesium ion \_\_\_\_\_