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| EHS Cλ3MIs+rγ  Mr. Genest |  | Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 1. Finish drawing out your mnemonic device for remembering what order electron orbitals fill:   1s  2s 2p | 1. Write the electron configuration (letters and numbers, no arrows) for Chlorine |
| 1. Write the electron configuration (letters and numbers, no arrows) for a Cl- ion |
| 1. The charge of the common calcium ion is \_\_\_\_\_. Write the electron configuration (letters and numbers, no arrows) for this calcium ion |

1. How many elements are there in Group 2?
2. How many elements are there in Period 2?
3. Which element in Group 13 has the smallest radius?
4. Which act more similarly, the elements in a period? the elements in a group?
5. Which element in Period 6 has the largest radius?
6. For the second element in Period 6,
   1. Write its symbol
   3. If this neutral element lost electrons it would become ( positive / negative ).
   4. Predict the oxidation of this element after it forms its ion \_\_\_\_\_\_\_\_
7. When neutral changes into Rb+ ion, the numbers of some particle(s) change.
8.  has \_\_\_\_\_\_\_ protons \_\_\_\_\_\_\_ electrons \_\_\_\_\_\_\_ neutrons
9. Rb+ ion has \_\_\_\_\_\_\_ protons \_\_\_\_\_\_\_ electrons \_\_\_\_\_\_\_ neutrons
10. Write the electron configuration (letters and numbers, no arrows) for a Scandium3+ ion
11. Which element in Period 4 has the greatest tendency to gain an e- (electron affinity)?
13. The number of neutrons in an atom is always equal to its
14. protons
15. neutrons
16. protons minus neutrons
17. mass minus protons
18. The atomic number of an atom is always equal to its
19. protons
20. neutrons
21. protons minus neutrons
22. mass minus protons
23. Name two elements that should have properties similar to the element that has 15 protons:
24. Circle the elements that would be expected to have similar properties to strontium:

Potassium magnesium rubidium beryllium

1. In each blank write <, =, or > to describe the amount of electrons in the two things:
2. a neutral oxygen atom \_\_\_\_\_\_\_\_ an oxygen ion
3. a Na atom \_\_\_\_\_\_\_\_ a Na+ ion
4. neutral sodium \_\_\_\_\_\_\_\_ the most common ion that it forms
5. a K+ ion \_\_\_\_\_\_\_\_ a neutral Ar atom
6. a F- ion \_\_\_\_\_\_\_\_ a Na+ ion
7. When it forms an ion, calcium becomes ( + / - ) and its radius (increases / decreases )
8. When it forms an ion, bromine becomes ( + / - ) and its radius (increases / decreases )
9. When it forms an ion, xenon becomes \_\_\_\_\_\_\_ and its radius \_\_\_\_\_\_\_\_\_\_\_\_\_
10. Circle the neutral atom which is HARDEST to steal an electron from

Sr Ag Te

1. Circle the neutral atom which is EASIEST to steal an electron from

Sr S Te

1. Circle the neutral atom with the smallest atomic radius

S O Si P