|  |  |  |
| --- | --- | --- |
| 1s22s2 To Lewis DotCλeMis+ry: http://genest.weebly.com The first three pages are all new today. Testable on May 27, but not Quizzable May 20th! Page 4 is VERY quizzable, however. |  | Name\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_ |

1. Rewrite the following Noble Gas Abbreviations in the longer version of electron configuration (1s2 2s2 etcetera)
	1. [Ar]4s23d2
	2. [He]2s22p5
	3. Write the Lewis Dot symbol for each of the two atoms above:

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
| 1s22s22p63s23p64s23d104p2 |
| Draw a Bohr orbital diagram (the circles) | Write a ‘number-number-number’ diagram for this atom |
| Write a Lewis dot diagram (Letter and dots) for this atom |
| This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable ) |

|  |
| --- |
| 1. Do three things for a NEUTRAL atom with the following electron configuration:
 |
| [Ar]4s23d104p3 |
| With the help of your table, write the long version of the above electron configuration.Tell how many e- are in each energy level1st: 2nd: 3rd: 4th: 5th:This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable )Write a Lewis dot diagram (Letter and dots) |

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
| 1s22s22p63s23p64s1 |
| Write a ‘number-number-number’ diagram for this atom | Write a Lewis dot diagram (Letter and dots) for this atom | This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable ) |

1. With the help of your table Rewrite the following Noble Gas Abbreviations in the longer version of electron configuration (1s2 2s2 etcetera)
	1. [Ar]4s23d104p4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. [He]2s22p5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Write the Lewis Dot symbol for *each* of the two atoms above:

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
| 1s22s22p63s23p64s23d104p65s24d105p3 |
| Write a ‘number-number-number’ diagram for this atom | Write a Lewis dot diagram (Letter and dots) for this atom | This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable ) |

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
| 1s22s22p63s23p64s23d5 |
| Write a ‘number-number-number’ diagram for this atom | Write a Lewis dot diagram (Letter and dots) for this atom | This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable ) |

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
| [Ar]4s23d2 |
| Write a ‘number-number-number’ diagram for this atom | Write a Lewis dot diagram (Letter and dots) for this atom | This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable ) |

|  |
| --- |
| 1. for a NEUTRAL atom with the following electron configuration:
 |
|  |
| Tell how many e- are in each energy level1st: 2nd: 3rd: 4th: 5th:This atom has \_\_\_\_\_\_\_\_ valence e-therefore it is (stable / unstable )Write a Lewis dot diagram (Letter and dots) |

1. In each box, use your table from Wednesday (or online at our website) to write the name of the shape.

|  |  |  |
| --- | --- | --- |
|  |  | The carbon on the left… |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| 1. The graph of ionization energies for a 13-electron atom is shown here. Based on the difficulty of ionization, electrons 1, 2, &3 are probably (near the nucleus / in the valence orbit)
2. Based on the difficulty of ionization, electrons 12 & 13 are probably (near the nucleus / in the valence orbit)
3. In the the box, draw a Bohr style atom. Your atom should have 13 protons. The electrons should be in three circular shaped orbits.
 |  | Draw a Number-Number-Number symbol for this atom in this box.Write the Lewis dot diagram here: |

1. Write a balanced equation for S2- anion losing two electrons:

\_\_\_\_ \_\_\_\_ + \_\_\_\_

1. Write a balanced equation for the only stable calcium ion gaining two electrons:

\_\_\_\_ + \_\_\_\_ \_\_\_\_

1. Draw a stable Lewis Dot structure for each molecule:

|  |  |
| --- | --- |
| H2S | N2 |
| HCl | F2 |

1. If electrons are smiley faces, in which case is the outermost electron tougher to remove?

1. In each pair, circle the pair that has a greater attraction.
2. an electron and proton that are 2 nanometers apart **or** an electron and proton that are 3 nanometers apart
3. an electron and the nucleus of nitrogen **or** an electron and the nucleus of oxygen

|  |  |  |
| --- | --- | --- |
| 1. In which situation below will attraction be stronger? ( A / B / no difference )
 |  | 1. In which situation below will attraction be stronger? ( A / B / no difference )
 |
| 1.
 |  | 1.
 |
| 1.
 |  | 1.
 |