| Unit 3B Review: Periodic Table | Name: |
|--|--------------------------------------|
| Organization of the Periodic Table | |
| Elements may react to form ions that have electron configurations like those | se of the NOVL GASES. |
| 2. Which element is in group 15 and period 2? Which elements are halogens? What charge of ions will they make? Why (v | what is hannening)? |
| FICI. Br. I. At, UUS (- | 1) they gain 1 electron |
| 4. Which elements are alkaline earth metals? What charge of ions will they m | |
| Be, Mg, Ca, Sr, Ba, Ra | (+2) they lose 2 electrons |
| | mallable oducti |
| | conductive Tustrous |
| 6. List at least three elements that are nonmetals. List three characteristics of | nonmetals. |
| C, F, Ne brittle, not co various | 148ters |
| 7. How many valence electrons do alkali metals have? | |
| Draw the Lewis dot structure for the following: | • |
| a. O | Mg Mg. |
| b. Al | Br Br: |
| Trends of the Periodic Table | |
| 9. Describe electronegativity. Wility of atom to attract electro | ns in a bond |
| 10. What happens to the atomic radius as you move left to right across one per gets smaller | eriod? Why? |
| more protons in nucleus pul | ling electrons in |
| 11. Which element has the highest electronegativity on the whole table? | |
| 12. An atom is chemically Stable when all of the orbitals in the out | ermost energy level are filled. |
| Which group of elements has NO electronegativity and VERY HIGH ionization | on energy? Why? |
| Noble do not bond -vi gases (inert) to | ery difficult vernove an electron |

| larger → more electrons = more shielding less pull toward 15. Is a potassium ion bigger or smaller than a potassium atom? Why? | 3 4 |
|---|-------|
| 15. Is a potassium ion bigger or smaller than a potassium atom? Why? | eus |
| smaller | |
| Ly more protons than electrons = more pull | towa |
| 16. Rank these from smallest to largest atomic radius: Ba, P, N Small arge | |
| N, P , $Ba17. Rank these from smallest to largest ionization energy: Y, Ni, Ne$ | |
| Y, Ni, Ne | |
| 18. Rank these from smallest to largest electronegativity: Cl, Ni, Ca | |
| Ca, Ni, Cl | |
| | |
| 19. Label the regions of the periodic table with group and period numbers as well as group names. | |
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| | 20 |
| 20.150 | 14 F |
| 1 2 3A 4A 5A 6A 5 | (A |
| 6 Va | |
| | I S I |
| 3 H S 6 7 8 9 10 11 12 Ex mexas 5 Transition Metalls resar | pou |
| | 2002 |
| 4 2 3 | Cas |
| S = Transition Metalls 200 | 2 2 |
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| inner transition janthanides | I |
| Metals actinides | _ _ |

14. Is an oxygen ion (oxide) bigger or smaller than an oxygen atom? Why?