## Graphing - Electronegativity as a function of Atomic Number

A. Create a graph of the electronegativity as a function of atomic number. Plot atomic number on the X axis and electronegativity on the Y axis. Remember to label the axes!
B. Use a colored pen, pencil or highlighter to trace over the element's period (horizontal row on the periodic table). For example: use GREEN to trace for all of the elements in row 1, then use YELLOW to trace for all of the elements in row 2, then use ORANGE to trace for all the elements in row 3, then use BLUE to trace for all the elements in row 4.


| Symbol | Atomic <br> Number | Electronegativity |
| :---: | :---: | :---: |
| H | 1 | 2.1 |
| He | 2 | 0 |
| Li | 3 | 1.0 |
| Be | 4 | 1.5 |
| B | 5 | 2.0 |
| C | 6 | 2.5 |
| N | 7 | 3.0 |
| O | 8 | 3.5 |
| F | 9 | 4.0 |
| Ne | 10 | 0 |
| Na | 11 | 0.9 |
| Mg | 12 | 2.0 |
| Al | 13 | 1.5 |
| Si | 14 | 1.8 |
| P | 15 | 2.1 |
| S | 16 | 2.5 |
| Cl | 17 | 3.0 |
| Ar | 18 | 0 |
| K | 19 | 0.8 |
| Ca | 20 | 1.0 |

1. Describe the trend in electronegativity as the atomic number increases across a period.
2. Describe the trend in electronegativity as the atomic number increases down a group.
3. Why do you think the electronegativity of $\mathrm{He}, \mathrm{Ne}$ and Ar is 0 ?
