



5. How does ionization energy change from Li to Ne? \_\_\_\_\_
6. How does ionization energy change from H to He? \_\_\_\_\_
7. How does ionization energy change from Na to Ar? \_\_\_\_\_
8. How does ionization energy change within any row on the periodic table? \_\_\_\_\_
9. Arrange the following from LOW IE to HIGH IE: Li, K, Na, H \_\_\_\_\_
10. Arrange the following from LOW IE to HIGH IE: Ar, He, Ne \_\_\_\_\_
11. Which has a higher I E larger? O or S? \_\_\_\_\_
12. How does ionization energy change going down a column on the periodic table? \_\_\_\_\_
13. Which has a higher IE? S or Si? \_\_\_\_\_
14. Which is more protons? S or Si? \_\_\_\_\_
15. Which has more protons? Na or Ar? \_\_\_\_\_
16. Which is has a higher IE? Na or Ar? \_\_\_\_\_
17. SO FAR, how does the number of protons affect ionization energy? \_\_\_\_\_
18. Which has more protons: Na or K? \_\_\_\_\_
19. Which has a higher IE? Na or K? \_\_\_\_\_
20. DOES YOUR ANSWER TO 17 still MAKE SENSE? \_\_\_\_\_
21. WHAT OTHER FACTOR ( besides protons) might affect ionization energy? \_\_\_\_\_
22. What is the effect of inner shell electrons on the outer shell? \_\_\_\_\_

**SUMMARY:**

As long as atoms are in the same horizontal row, more protons will cause atoms to be \_\_\_\_\_ and their ionization energy to be \_\_\_\_\_.

When moving down a column, the addition of \_\_\_\_\_ SHIELDS the outer shell from the \_\_\_\_\_, which causes the atom to be \_\_\_\_\_ even though there are more protons. This causes their ionization energy to be \_\_\_\_\_.

**BOTTOM LINE:**

Atoms get \_\_\_\_\_ when moving from left to right on the periodic table, which causes their ionization energy to be \_\_\_\_\_ and \_\_\_\_\_ when moving from top to bottom, which causes their ionization energy to be \_\_\_\_\_.