Name Answer Key Hour _____

COMPARING THE TRENDS ON THE PERIODIC TABLE

(Honors Chemistry)

Provide the group and period trends, and then explain your answers in the space provided.

	Group Trends *(Top to Bottom)*	Period Trends *(Left to Right)*
Atomic Size	INCREASE More energy levels	DECREASE ENC increase
Ionization Energy	DECREASE Easier to remove electrons from larger atoms	INCREASE ENC increases
Ionic Size	INCREASE more energy levels	NONMETALS INCREASE METALS DECREASE
Electronegativity	DECREASE Large atoms have trouble attracting electrons	INCREASE High ENC
Shielding Effect	INCREASES more energy levels	S Block: Constant P Block: Constant d Block: Increase
Nuclear Charge	INCREASE Atomic number increase	INCREASE Atomic number increase

Using Atoms to determine Trends

(Honors Chemistry)

1. Which of the following pairs has a lager atomic size?

Carbon	Oxygen
Nitrogen	Tin
Hydrogen	Lithium
Strontium	Manganese
Bromine	Vanadium
Carbon	Silicon
Francium	Cadmium
Argon	Radon
Mercury	Gold
Silver	Yttrium

2. Tell whether the ion or the neutral atom is larger.

Oxygen	Oxygen Anion
Nitrogen	Nitrogen Anion
Magnesium	Magnesium Cation
Sulfur	Sulfur Anion
Calcium	Calcium Cation
Sodium	Na^{+}
Aluminum	Al^{3+}
Chlorine	Cl^{-}
Phosphorus	P^{3-}
Beryllium	Be^{2+}

3. Which of the following pairs of atoms has the larger ionization energy?

Boron	Carbon
Aluminum	Boron
Helium	Argon
Cobalt	Bromine
Californium	Thorium
Sodium	Chlorine
Copper	Nickel
Tungsten	Cesium
Lithium	Rubidium
Gallium	Indium

4. Which of the following pairs of atoms has a larger electronegativity?

Radon	Astatine
Selenium	Polonium
Terbium	Berkelium
Hydrogen	Helium
Boron	Gallium
Carbon	Boron
Neon	Radon
Lithium	Beryllium
Calcium	Barium
Copper	Gold