



Name _____ Class _____ Date _____

1 Which **process** converts an atom from one element to another, when the **nucleus of an atom is bombarded** with high-energy particles?

- A artificial transmutation
- B natural transmutation
- C addition polymerization
- D condensation polymerization

2 What is the total number of electrons in the **valence shell** of an atom of aluminum in the ground state?

- A 8
- B 2
- C 3
- D 10

13
Al
Aluminum

3 Which of these elements has **physical and chemical properties** most similar to **silicon (Si)**?

4 Which of the following elements has the **highest electronegativity**?



PREVIEW

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7

- A the same mass number and the same atomic number
- B the same mass number but different atomic numbers
- C different mass numbers but the same atomic number
- D different mass numbers and different atomic numbers

8

- A high ionization energy and poor electrical conductivity
- B high ionization energy and good electrical conductivity
- C low ionization energy and poor electrical conductivity
- D low ionization energy and good electrical conductivity

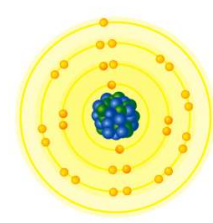
9 Which **element** is classified as a **noble gas** at STP?

- A hydrogen
- B oxygen
- C neon
- D nitrogen

								2 He Helium
	5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon		
	13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon		
	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	
	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	
	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon	

10 **Metallic bonding** occurs between atoms of

- A sulfur
- B copper
- C fluorine
- D carbon





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