



Name _____ Class _____ Date _____

1 Which element of **Group 17** exists as a **solid at 25°C** and standard pressure?

- A fluorine
- B chlorine
- C bromine
- D iodine

17	
9	F Fluorine
17	Cl Chlorine
35	Br Bromine
53	I Iodine
85	At Astatine

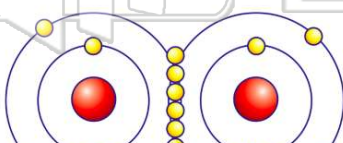
2 Which group in the Periodic Table contains elements that are all **monatomic gases** at STP?

- A 15
- B 16
- C 17
- D 18

				18
				2 He Helium
7	8	9	10	2
N Nitrogen	O Oxygen	F Fluorine	Ne Neon	
15	16	17	18	3
P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon	
33	34	35	36	4
As Arsenic	Se Selenium	Br Bromine	Kr Krypton	
51	52	53	54	5
Sb Antimony	Te Tellurium	I Iodine	Xe Xenon	
83	84	85	86	6
Bi Bismuth	Po Polonium	At Astatine	Rn Radon	

3 Which molecule contains a **triple covalent bond** between its atoms?

- A N₂
- B O₂
- C F₂
- D H₂



4 When a **chemical bond is broken**, energy is

- A absorbed, only
- B released, only
- C both absorbed and released
- D neither absorbed nor released



PREVIEW

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7
C electronegativities
A atomic radii
D atomic numbers

14	15	16	17	18
C Carbon	N Nitrogen	O Oxygen	F Fluorine	Ne Neon
14	15	16	17	18
Si Silicon	P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon

- A Be
- B Mg
- C Ca
- D Ba

19	20	21	22	23
K Potassium	Ca Calcium	Sc Scandium	Ti Titanium	V Vanadium
37	38	39	40	41
Rb Rubidium	Sr Strontium	Y Yttrium	Zr Zirconium	Nb Niobium
55	56	57	72	73
Cs Cesium	Ba Barium	La Lanthanum	Hf Hafnium	Ta Tantalum
87	88	89	104	105
Fr Francium	Ra Radium	Ac Actinium	Rf Rutherfordium	Db Dubnium

9 In which shell are the **valence electrons** of the elements in **Period 2** found?

- A 1
- B 2
- C 3
- D 4

				18
				2 He Helium
6	7	8	9	10
C Carbon	N Nitrogen	O Oxygen	F Fluorine	Ne Neon
14	15	16	17	18
Si Silicon	P Phosphorus	S Sulfur	Cl Chlorine	Ar Argon

10 Which of the following **Group 15** elements has the **greatest metallic character**?

- A nitrogen
- B phosphorus
- C antimony
- D bismuth

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



ANSWER KEY

Which element of **Group 17** exists as a **solid** at 25°C and standard pressure?

- A fluorine
- B chlorine
- C bromine
- D iodine

17
9 F Fluorine
17 Cl Chlorine
35 Br Bromine
53 I Iodine
85 At Astatine

(d)

Which group in the Periodic Table contains elements that are all **monatomic gases** at STP?

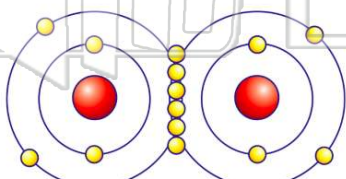
- A 15
- B 16
- C 17
- D 18

				18
	15	16	17	2 He Helium
7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon	1 1
15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon	2 2
33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	3 3
51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	4 4
83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon	5 5
				6 6

(d)

Which molecule contains a **triple covalent bond** between its atoms?

- A N₂
- B O₂
- C F₂
- D H₂



(a)

When a **chemical bond is broken**, energy is

- A absorbed, only
- B released, only
- C both absorbed and released
- D neither absorbed nor released



(a)



PREVIEW

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D atomic numbers

C	N	O	F	Ne
Carbon	Nitrogen	Oxygen	Fluorine	Neon
14	15	16	17	18
Si	P	S	Cl	Ar
Silicon	Phosphorus	Sulfur	Chlorine	Argon

- B Mg
- C Ca
- D Ba

	37	38	39	40	41
5	Rb Rubidium	Sr Strontium	Y Yttrium	Zr Zirconium	Nb Niobium
6	55 Cs Cesium	56 Ba Barium	57 La Lanthanum	72 Hf Hafnium	73 Ta Tantalum
7	87 Fr Francium	88 Ra Radium	89 Ac Actinium	104 Rf Rutherfordium	105 Db Dubnium

In which shell are the **valence electrons** of the elements in **Period 2** found?

- A 1
- B 2
- C 3
- D 4

				18
	14	15	16	17
	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine
	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine
				2 2
				3 3
				18
				1 1

(b)

Which of the following **Group 15** elements has the **greatest metallic character**?

- A nitrogen
- B phosphorus
- C antimony
- D bismuth

					18
	13	14	15	16	17
	5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine
	13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine
	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine
	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine
	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine
					6 6

(d)