





ST Review

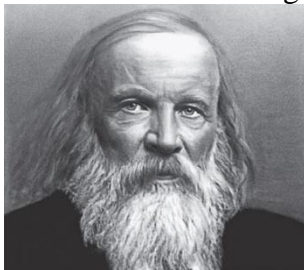
1. Which of the following diagrams best represents the aluminum (Al) atom according to the Lewis model?

 <p>A</p>	 <p>B</p>
 <p>C</p>	 <p>D</p>

2. An atom that is represented by the Lewis notation has 7 dots. Which group of the periodic table does it belong to? (see periodic table for roman numerals)

(A) This atom belongs to group VIIA.	(B) This atom belongs to group VIA.
(C) This atom belongs to group IIA.	(D) This atom belongs to group IA.

3. Which of the following was **not** a feature of Mendeleev's periodic table?



(A) He did not necessarily order the elements by increasing mass.	(B) He grouped elements with similar chemical properties.
(C) He ordered elements by increasing atomic mass.	(D) He ordered the according to similar physical properties.

4. Which of the following elements is correctly matched with its family?

(A) Tl is an alkaline earth metal	(B) Kr is a halogen.
(B) Be is an alkaline earth metal.	(D) Ca is an alkali metal.

5. Which of the following statements is true?

(A) Alkali earth metals are more reactive than most metals	(B) Halogens tend to react with argon(Ar).
(C) Noble gases are very reactive.	(D) The most reactive gas in the first period is helium.

6. Which of the following does NOT describe a real property of a periodic table family?

(A) Any alkali metal is softer than steel.	(B) Alkaline earth metals react with oxygen and halogens.
(C) Noble gases have high boiling points.	(D) The halogens create salts after reacting with metals.

7. $73 + X = 111 + 18 + 44$

$X = 100g$

8. **A) lime is a base so it will raise the pH of water.**

B) 7.0

9. $V = IR$

$9 = 1.2R$

$R = 7.5 \Omega.$

10. **A) It's an alkaline earth metal since the valence is 2.**

You could also call it group IIA(see periodic table)

B) 3rd period(a period is a horizontal row of the periodic table, and Mg's valence electrons are in the third shell and it has 12 electrons and 12 protons. We know it's magnesium, assuming it is neutral.)

11. Na = 11 p) 2e) 8e)1e, so Lewis structure is = Na[•]
But after losing an electron to chlorine it will become Na⁺.

Cl = 17 p) 2e) 8e)7e, so Lewis structure is = :Cl:

But after gaining an electron from sodium it will

become Cl⁻ = :Cl:⁻

12. Draw the high tides facing the full moon, and the low tides at 90° to the moon.

13. Fossil energy comes from underground= lithosphere

Geothermal comes from lithosphere.

Tidal energy= oceans = hydrosphere.

Wind energy = atmosphere

14. From cow = ammonification and decomposition

In water, bacteria and blue green algae = nitrogen fixation(this also happens in soil around roots of legumes)

Going back to the atmosphere= denitrification

In soil turning to nitrites = nitrification

