

Periodic table worksheet 2

- Which of the following is the Lewis structure for magnesium?

A) $\text{Mg} \cdot$ **B) $\cdot \overset{\cdot}{\text{Mg}}$** C) $\cdot \overset{\cdot}{\text{Mg}} \cdot$ D) $\begin{array}{c} \cdot \cdot \cdot \cdot \\ | \\ \text{Mg} \\ | \\ \cdot \cdot \cdot \cdot \end{array}$
- Which one of these characteristics alone provides the information you need to represent an atom using the Lewis notation?

A) The group number C) The atomic mass
B) The period number D) The number of protons
- During ionization, an atom can become a positive ion. How does an atom become a positive ion?

A) It gains one or more electrons **C) It loses one or more electrons**
B) It gains one or more protons D) It loses one or more protons
- If a calcium (Ca) atom becomes a positive ion, what will be the distribution of the charges carried by this ion?

A) 20 positive charges and 18 negative charges C) 18 positive charges and 18 negative charges
B) 20 positive charges and 20 negative charges D) 20 positive charges and 22 negative charges

5. Which atom is correctly represented with the Lewis notation?



6. An element from period 3 is represented below in Lewis notation.



- What is the name of this element? Mg
- Draw the Rutherford Bohr diagram of this element.



7. The salinity of water is due to the presence of mineral salts. Sodium chloride (NaCl) is one of the salts dissolved in seawater. Use Lewis notation to represent each atom that makes up sodium chloride (NaCl).



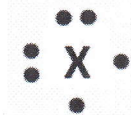
8. Represent the Lewis notation for the following.

Li	Be	B	C	N	O	F	Ne
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9. Give the ionic charge for the following elements..

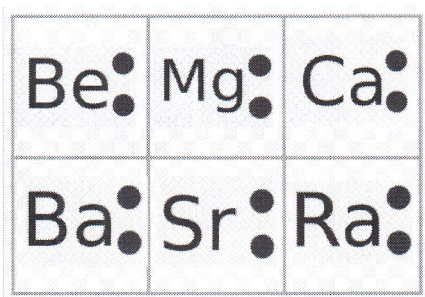
Li ⁺¹	Be ⁺²	B ⁺³	C ⁺⁴ ₋₄	N ⁻³	O ⁻²	F ⁻¹	Ne ⁰
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10. What group does the picture below belong to?



7

11. What is wrong with the representation of the elements below?



- dots are not supposed to pair up until each coordinate point has a dot.

12. Each statement is incorrect; correct the wrong part so that it reads correctly.

a- O has a -2 charge because it ~~donates~~ ^{receives} 2 electrons during a chemical reaction.

b- Mg has a -2 charge because it donates electrons during a chemical reaction.

+2

c- Ar has no charge because it is chemically active.

inactive

d- Al has a +2 charge because it donates 2 electrons during a chemical reaction.

+3

3

e- Elements within the same group form ~~different~~ ions.

same

f- Ca has a +2 charge because it donates two ~~protons~~ during a chemical reaction.

electrons