

Chapter 7 Periodic Table

Standards Practice

1 Which of the following *best* describes the elements located in the far right group of the periodic table?

- A highly reactive metals
- B inert gases
- C highly reactive nonmetals
- D semimetals

2 Where in the periodic table are metals found?

- A only in the two rows below the main table
- B to the right of the zigzag line
- C to the left of the zigzag line and in the two rows below the main table
- D to the right of the zigzag line and in the two rows below the main table

3 An element located in Group 16 of the periodic table is either a

- A nonmetal or a semimetal.
- B metal or a nonmetal.
- C nonmetal or an inert gas.
- D metal or a semimetal.

4 A student is identifying an unknown substance based on its properties. The student has found that the substance can conduct electric current only at high temperatures, not at low temperatures. Where in the periodic table is the probable location of the element making up this substance?

- A at the far right side
- B at the far left side
- C along the zigzag line
- D in the two rows below the main table

5

36
Kr
Krypton
83.80

How many protons does an atom of krypton have?

- A 18
- B 36
- C 83
- D 83.80

6 Which of the following locations in the periodic table would have the *least* massive atom?

- A bottom right
- B bottom left
- C top right
- D top left

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7 Carbon-14 is a radioactive isotope. When a carbon-14 atom decays, a neutron inside the nucleus changes into a proton and a high-energy electron. The proton remains inside the nucleus, while the high-energy electron is released from the nucleus. As a result of this process, the carbon-14 atom

- A becomes an isotope of a different element.
- B remains an isotope of carbon.
- C has the same atomic number.
- D has a different mass number.

8 Carbon-12, carbon-13, and carbon-14 are the three isotopes of carbon. The atoms of these isotopes have

- A the same mass number.
- B different numbers of electrons.
- C different numbers of protons.
- D the same atomic number.

9 Which of the following properties is *not* a property of metals?

- A high thermal conductivity
- B brittleness
- C hardness
- D high electrical conductivity

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Periodic Table of the Elements (Top Section)

1	2																	18
2																		
3	A	C	3	4	5	6	7	8	9	10	11	12						B
4	D																	

Which two elements are *most* likely to have similar chemical properties?

- A Elements D and C
- B Elements A and C
- C Elements A and D
- D Elements C and B

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The atoms of substances that are good electrical conductors

- A have freely moving electrons.
- B hold on tightly to their electrons.
- C have more neutrons than electrons.
- D have eight valence electrons.

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In general, solid nonmetals are

- A hard and shiny.
- B brittle and dull.
- C good conductors of electric current.
- D brittle and malleable.

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13 Which group of the periodic table contains the *least* reactive elements?

- A Group 1
- B Group 2
- C Group 17
- D Group 18

14 Substance A has been found to conduct electric current and heat and is hard and shiny. Substance B conducts neither electric current nor heat and is dull and brittle. Which of the following statements *best* describes both substances?

- A Both Substance A and Substance B are metals.
- B Both Substance A and Substance B are nonmetals.
- C Substance A is a nonmetal and Substance B is a metal.
- D Substance A is a metal and Substance B is a nonmetal.