

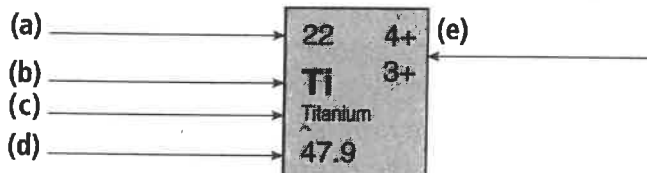
Use with textbook pages 52–57.

What is in the box?

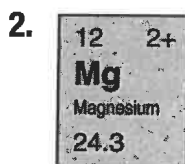
Test your knowledge how information is displayed for each element in the periodic table.

1. Use the vocabulary words listed to label the diagram.

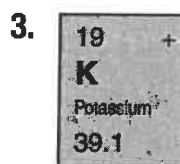
Vocabulary	
ion charge	name
atomic number	symbol
average atomic mass	



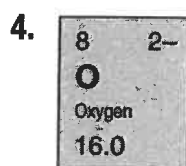
Examine the periodic table entry for each of the following elements and complete the blanks below.



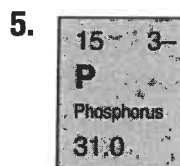
- (a) atomic number _____
 (b) average atomic mass _____
 (c) ion charge _____
 (d) number of protons _____



- (a) name of element _____
 (b) ion charge _____
 (c) number of protons _____
 (d) average atomic mass _____



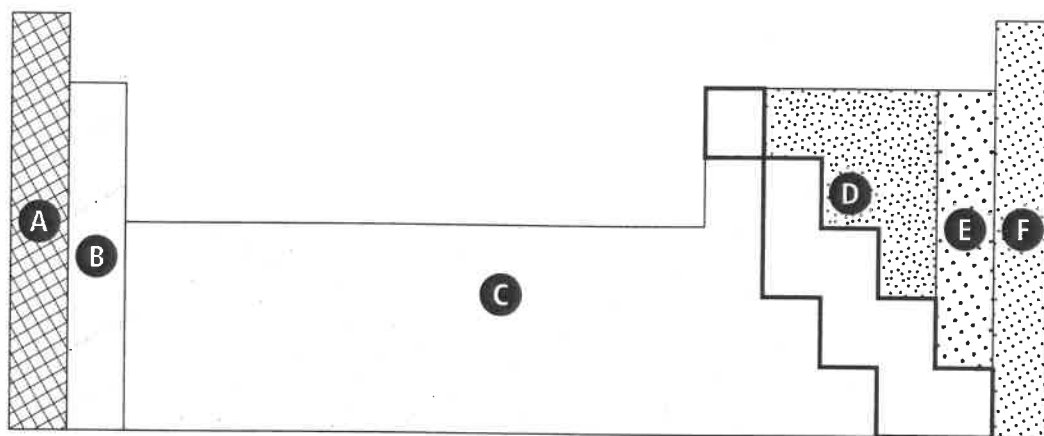
- (a) atomic number _____
 (b) average atomic mass _____
 (c) ion charge _____
 (d) symbol of element _____



- (a) name of element _____
 (b) average atomic mass _____
 (c) ion charge _____
 (d) number of protons _____

Use with textbook pages 52–57.

Families of elements



Use the simplified periodic table shown above to answer questions 1 to 12. To which region does each element or family belong? Place the letter corresponding to the shaded region on the blank line. You can use regions more than once.

You can use the periodic table on page 201 to help you answer these questions.

1. helium _____
2. lithium _____
3. fluorine _____
4. beryllium _____
5. halogens _____
6. noble gases _____
7. alkali metals _____
8. alkaline earth metals _____
9. non-metallic elements that are strongly reactive _____
10. metallic elements that are strongly reactive _____
11. metallic elements that are reactive _____
12. non-metallic elements that are very unreactive _____

Name _____

Date _____

Use with textbook pages 52–57.

Using the periodic table

Vocabulary

average atomic mass
atomic number
electrons
families
good
halogens
ions
ion charge
metals

metalloids
multiple ion charge
noble gases
non-metals
periodic table
periods
poor
properties

Use the terms in the vocabulary box to fill in the blanks. You can use each term more than once. You will not need to use every term.

1. The _____ organizes the elements according to their physical and chemical _____.
2. The periodic table is divided into seven horizontal rows called _____ and 18 vertical columns called _____.
3. _____ appear on the left side of the periodic table. These elements are _____ conductors of heat and electricity.
4. _____ appear on the right side of the periodic table. These elements are _____ conductors of heat and electricity.
5. The _____ form a zigzag staircase arrangement on the periodic table. These elements have properties similar to both _____ and _____.
6. The _____ refers to the number of protons that an atom has in the nucleus.
7. The _____ is the weighted average of the masses of the atoms of an element.
8. A(n) _____ is an electric charge that forms on an atom when it gains or loses electrons.
9. Some metals, like platinum and cobalt, form _____ in more than one way. In other words, they have a(n) _____.

Use with textbook pages 168–180.

The atom and the subatomic particles

1. Use the following vocabulary words to label the diagram.

Vocabulary	
common ion charge	symbol
other ion charge	atomic number
name	average atomic mass

(a) _____	<table border="1" style="text-align: center;"> <tr> <td>22</td> <td>4+</td> </tr> <tr> <td>Ti</td> <td>3+</td> </tr> <tr> <td colspan="2">Titanium</td> </tr> <tr> <td>47.9</td> <td></td> </tr> </table>	22	4+	Ti	3+	Titanium		47.9		(e) _____
22		4+								
Ti		3+								
Titanium										
47.9										
(b) _____	(f) _____									
(c) _____										
(d) _____										

2. Examine the periodic table for the element below and complete the blanks.

35	--
Br	
Bromine	
79.9	

- | | |
|---------------------------|-------------------------------|
| (a) atomic number _____ | (b) average atomic mass _____ |
| (c) ion charge _____ | (d) number of protons _____ |
| (e) name of element _____ | (f) number of neutrons _____ |

3. Complete the following table for the different atoms and ions. The first two rows have been completed to help you.

Element Name	Atomic Number	Ion Charge	Number of Protons	Number of Electrons	Number of Neutrons
potassium	19	1+	19	18	20
phosphorus	15	0	15	15	16
	3	0			
		2+	20		
nitrogen		3-			
	5	0			
argon				18	
	13			10	
chlorine		0			
			11	10	