

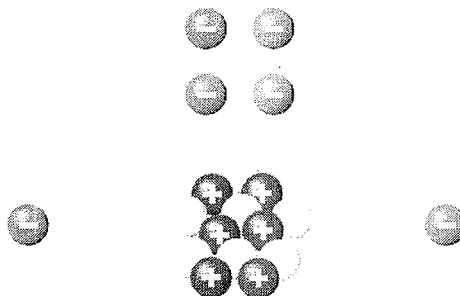
Goal • Demonstrate your knowledge of subatomic particles.

What to Do

1. Complete the chart below to show the location and electric charge of the three subatomic particles.

Particle	Location in Atom	Electric Charge
Electron		
Proton		
Neutron		

Use the diagram of an atom to answer the following questions.

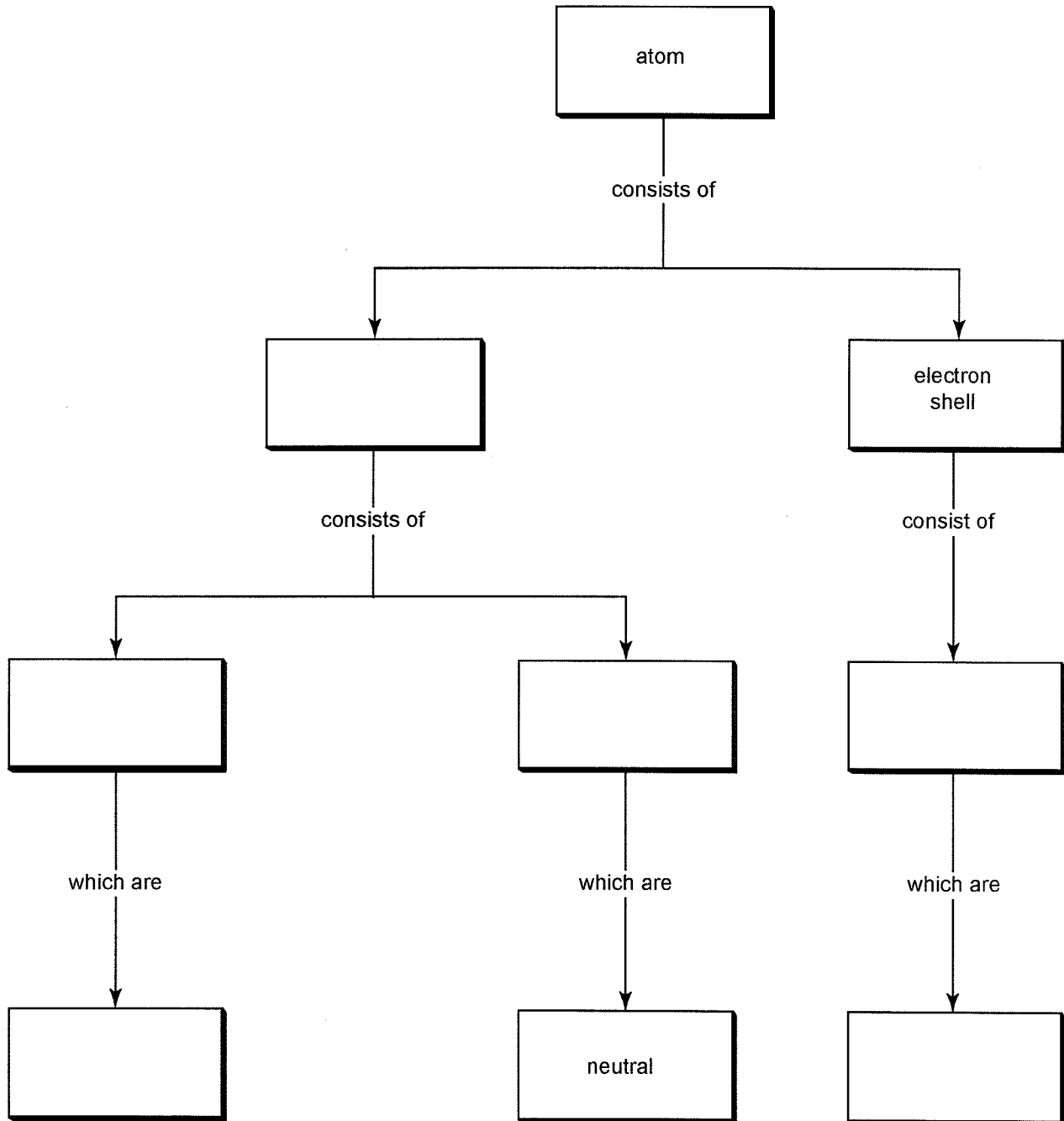


2. Label the parts of the atom. Include the following labels: proton, electron, neutron, energy level, nucleus.
3. (a) What is the electric charge of this nucleus? _____
 (b) What is the electric charge of this atom? _____

Goal • Complete concept map that shows the relationship among the parts of the atom.

What to Do

Complete this concept map for the parts of an atom. Use each of the following terms
electron, negatively charged, neutron, proton, nucleus, positively charged



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 style="border-collapse: collapse; text-align: center;"> <tr> <td style="padding: 2px 10px;">22</td> <td style="padding: 2px 10px;">4+</td> </tr> <tr> <td style="padding: 2px 10px;">Ti</td> <td style="padding: 2px 10px;">3+</td> </tr> <tr> <td colspan="2" style="padding: 2px 10px;">Titanium</td> </tr> <tr> <td colspan="2" style="padding: 2px 10px;">47.9</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	