Rosary School – Marj Elhamam
Worksheet (7)

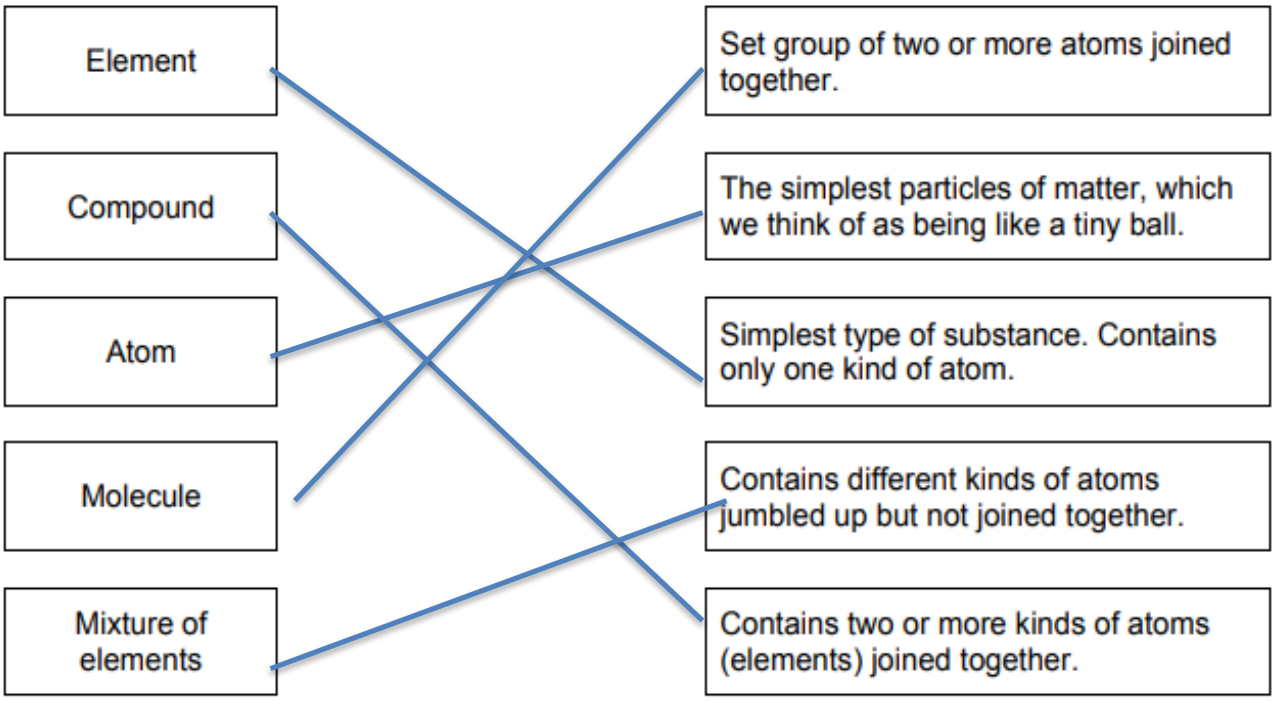
Name: Date: / / 2025

Grade: 7 (A,B,C,D,E) Subject: Chemistry

7H: Atoms, elements and molecules

Question one:

Draw a line to match up the words with the correct description.



Question two:

Tick *one* box to say if each the following substances are elements or compounds.

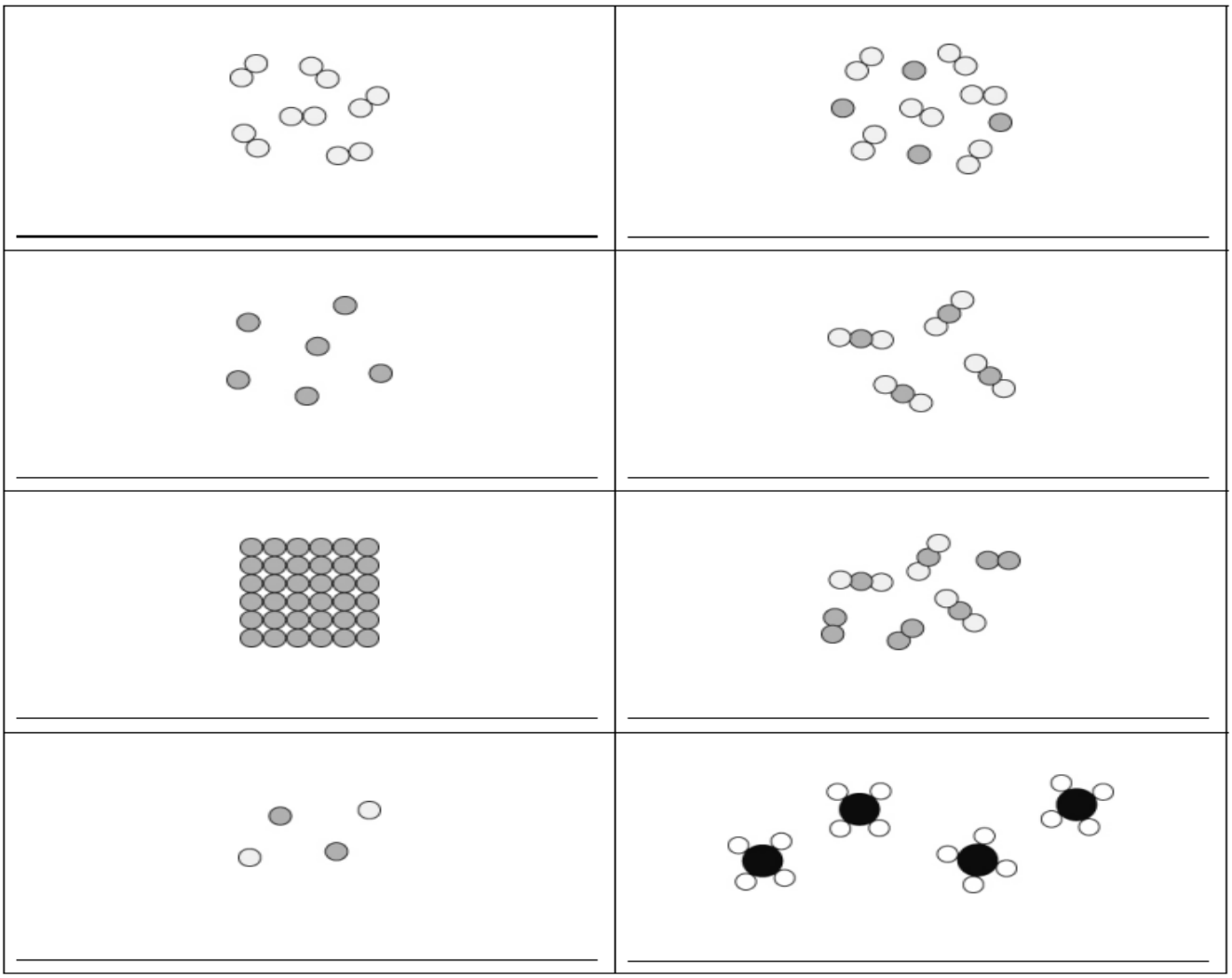
	Element	**Compound**
nitrogen	☐	☐
argon	☐	☐
oxygen	☐	☐
carbon dioxide	☐	☐

Answer: Nitrogen-element, Argon-element, Oxygen-element, Carbon dioxide-compound

Question three:

For each diagram choose one of the following terms that best describes the model shown.

element compound mixture

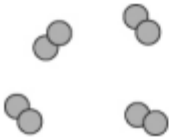


Answer:

Element	Mixture of elements
Element	Compound
Element	Mixture of compound & element.
Mixture of elements	Compound

Question four:

Write the word ‘atoms’ or ‘molecules’ below the correct diagrams. Explain your answer.



Picture A

Picture B

Answer:

1) Molecules.
2) Atoms.

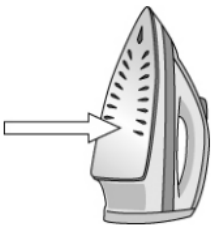
Explanation: Picture A represents molecules as two atoms are joined together in small groups while picture B represents atoms as it is made up of single particles.

Question five:

Choose a word/phrase from the box to describe the property shown by the picture.

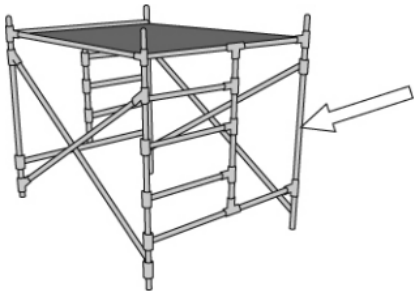
brittle	conductor of heat	conductor of electricity	flexible	hard
high boiling point	low melting point	strong	shiny	

a

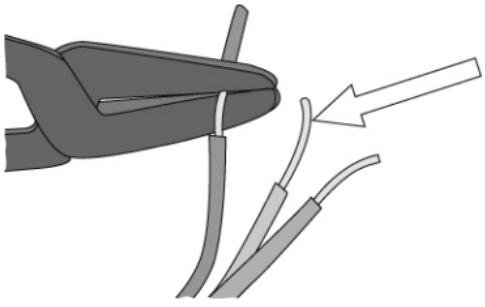


b

c



d



a)conductor of heat/shiny/strong.

b)flexible.
c)brittle.
d) conductor of electricity.

Question six:

Name the property that makes each of the following suitable for the use described.

a Steel, used for the sides of a radiator.

b Silver, used to make bangles and bracelets.

c Gold, used to make connections in computer circuits.

Answer:
a) good conductor of heat.
b) malleable.
c) conductor of electricity.

Question seven:

Circle the correct symbol for the elements named below.

H	**He**	**S**	**Ag**

a helium

b silver

he	**HE**	**AG**	**Si**

Answer:

a) Helium → He
b) Silver→ Ag

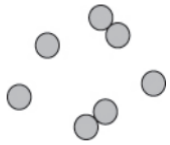
Question eight:

The drawings show the particles in four different substances.

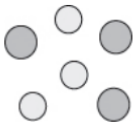
(a) Which of the drawings shows a mixture of compounds? Tick **one** box.

- ☐ A
- ☐ B
- ☐ C
- ☐ D

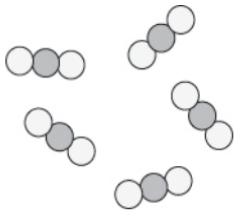
A



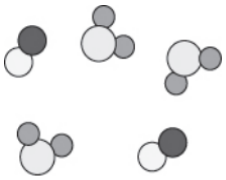
B



C



D



b) give an example of a mixture: _____

Answer:

a) D

b) Air: mixture of gases such as oxygen, nitrogen, argon & carbon dioxide.

Question nine:

Draw atoms or molecules in the boxes. Use a **circle** to represent an atom.

1- Mixture of different elements.

2- Four molecules of pure compound, each made of two atoms.

Question ten:

(a) Complete the table below by adding the missing names and symbols.

Name	Symbol
_____Aluminum____	Al
Oxygen	_____O_____
Iron	_____Fe_____
_____Calcium_____	Ca

(b) Write down the **name** for the element(s) that fit these descriptions

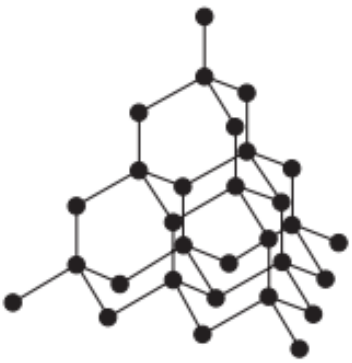
a used in pencils _____

b found in air _____

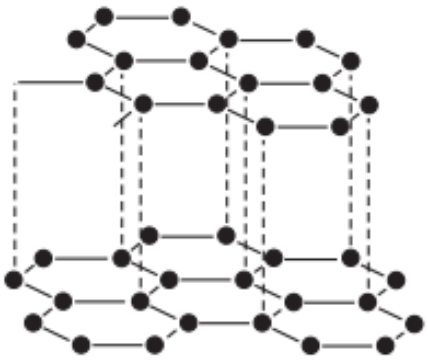
c used for jewellery _____

Answer:
a) Carbon in the graphite.
b)Oxygen/nitrogen/argon
c) Gold

Question eleven:
The diagrams show two forms of carbon: graphite and diamond.



A



B

C

a- What are A and B?

A: _____Diamond_____ B: _____Graphite_____

b- State one difference between graphite and diamond.

Graphite is soft while diamond is hard.

c- Explain how the same element, carbon, has such different properties in graphite and diamond?

As they have different structures, therefore different uses and properties.

d- Diamond is used to make jewelry. State other use for diamond.

Used as a cutting tool.

Question twelve:

The table below shows the percentage of nitrogen and other gases in the air.

a) Complete the table by writing the percentage of oxygen in the air.

Oxygen → 21%

Gases	Percentage
nitrogen	78%
oxygen	
all other gases	1%

b) Name a gas that is part of the 1% of 'other gases'.

Carbon dioxide.

c) Use of nitrogen→ putting out fire.

d) Air is a mixture of gases. Describe the difference between a mixture and a pure substance.

A mixture is made up of different substances that are not chemically joined.

A pure substance is made up of one type of substance.

Question thirteen:

Use the substances listed in the box below to answer these questions.

carbon dioxide	iron	nitrogen	oxygen	silver	water

a) State the substances which are elements.

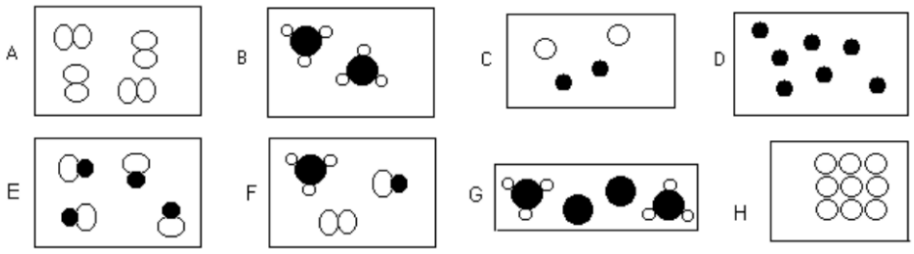
Iron, nitrogen, oxygen, silver

b) State the substances which are compounds.

Carbon dioxide, water.

Question fourteen:

Look at the diagrams below. Match the correct diagram to each description. Write the letter of the diagram in the table.



Description	Letter
(a) molecules of an element	
(b) molecules of a compound	
(c) a mixture of different elements	
(d) a mixture of an element and a compound	

Answer: a) A b) B c) C d)F

Teachers: Farah Yamak and Veronica Mkhjian