element	compound
— pure substance made of 1 kind of atom — cannot be broken down into simpler substances ⇒ Ca, Be, Fe, Hg	— pure substance made of 2 or more elements — can be broken down into elements ⇒ CO_2, H_2O, $C_6H_{12}O_6$

2. How many types of particles do the following groups of substances contain?

Pure substances contain one type(s) of particles.

Mixtures contain 2 or more type(s) of particles.

Two examples of pure substances are silver and copper oxide

Two examples of mixtures are cookie dough and air

pizza tap water.

4. Write the formula for the following compounds. Draw a model of a molecule of one of them.

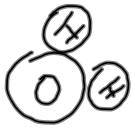
a) table salt

sodium chloride

NaCl

b) water

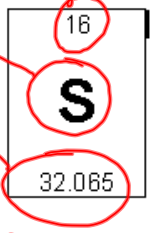
H_2O



c) Drano NaOH

d) carbon dioxide

CO_2



chemical symbol for sulphur

atomic number — number of protons in nucleus
→ also gives number of e^- orbiting the nucleus

average atomic mass
→ gives average number of protons and neutrons in atom

$p^+ + n^\circ$

* S-33, $^{33}_{16}S$ has atomic mass of 33

⇒ 33 p^+ and n°, 16 of which are p^+

$$\begin{array}{r} 33 \\ -16p^+ \\ \hline 17n^\circ \end{array}$$

∴ there are 16 protons and 17 n° in an atom of S-33

→ S-34 still has 16 p^+ so must have 18 n°