

EXAM: Atomic Models & Periodic Table

Name: _____

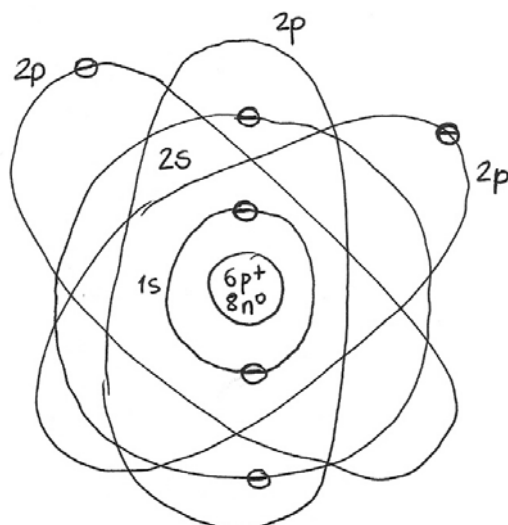
Group: _____

1. a) Fill in the following table
 b) Which ones are isotopes? Why?
 c) Draw a "C" atom, showing all its particles (protons, electrons, neutrons) and according to Bohr's model of the atom

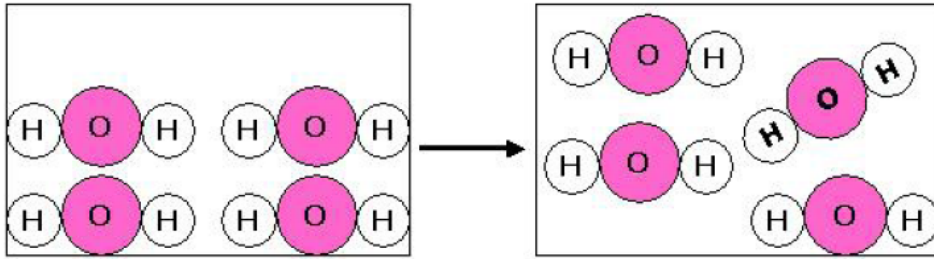
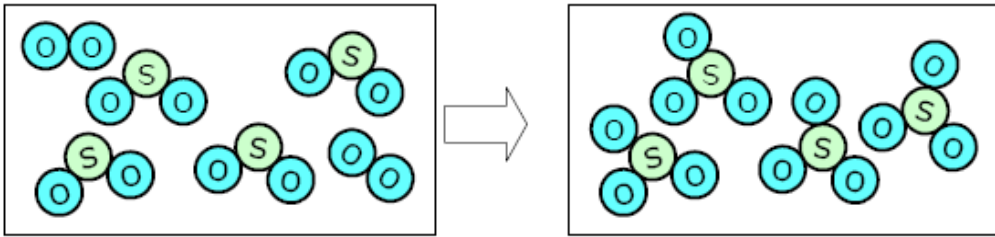
	Atomic number (Z)	Mass number (A)	# of protons	# of neutrons	# of electrons	Lewis notation
A²⁻	8	17	8	9	10	$\text{:}\ddot{\text{A}}\text{:}^{2-}$
B	15	31	15	16	15	$\cdot\ddot{\text{B}}\cdot$
C	6	14	6	8	6	$\cdot\ddot{\text{C}}\cdot$
D⁺	11	23	11	12	10	D^+
E	6	12	6	6	6	$\cdot\ddot{\text{E}}\cdot$

① b) C and E are isotopes, different versions of the same element: they have the same amount of protons

c)

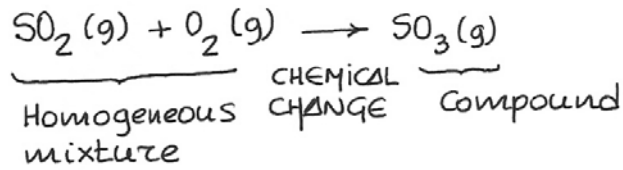


2. a) Classify the matter in each of the following cases
 b) Determine if the change is physical or chemical
 c) Describe each change showing the formulas and physical state of each substance

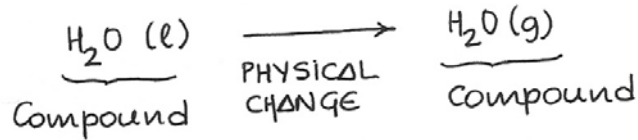


(No fixed shape)

② 1st process



2nd process



3. The electrons of a group of hydrogen atoms have been excited and are all found at $n=4$ level.

a) Build an energy diagram in which the energy levels (from $n=1$ to $n=4$) and the origin of energies (energy=0) are shown. Specify in that diagram all the possible jumps downwards. [0.5 POINTS]

b) Draw the spectral lines that correspond to all possible jumps downwards from $n=4$ [1 POINT]

