

IONIC & MOLECULAR SUBSTANCES 2

1) Which of the following substances could be simple molecular and which are ionic? Some are neither!

	CaF ₂	NO ₂	Au	Na ₂ CO ₃	Al ₂ O ₃	СО	C ₂ H ₆ S	Ar	PH ₃
ionic									
simple molecular									
neither									

2) Look at the properties of the following substances.

Substance	M W (00)	D ''' : 1 (00)	Electrical conductivity as			
	Melting point (°C)	Boiling point (°C)	solid	liquid		
Р	-48	125	does not conduct	does not conduct		
Q	1036	1835	does not conduct	conducts		
R	3405	4278	does not conduct	does not conduct		
S	649	1384	does not conduct	conducts		
T	98	520	conducts	conducts		
U	1830	2472	conducts	conducts		

- a) Which of these compounds could have an ionic structure?
- b) Which of these compounds could have a simple molecular structure?

3) Complete the table to show stick and/or dot-cross diagrams for these molecules.

Molecule	Stick diagram	Dot-cross diagram		
H₂S	H—S—H			
C ₂ H ₂	н—с <u>—</u> с—н			
PF ₃				

) '	white the formula of the following forfic compounds.								
á	a) potassium bromide		d)	magnesium carbonate					
ŀ	o) calcium hydroxide		e)	aluminium nitrate					
(c) iron (III) fluoride		f)	ammonium sulfate					
	Aluminium oxide (Al ₂ O ₃) is	minium oxide (Al_2O_3) is an ionic compound. Carbon dioxide (CO_2) is a simple molecular compound.							
	Explain what the formula Al ₂ O ₃ tells us about aluminium oxide.								
ŀ	Explain what the formu	ıla CO₂ tells us about carbon d	ioxic	le					
(a very high melting point (207		while carbon dioxide has a vei					
c				However, aluminium oxide will d					
	molten. Explain this di		ato.	However, alaminam oxide will c	orithat electrony when it is				
			•••••						
			•••••						