

1. Complete the following table:

	Chemical Formula with state!	Chemical Name	Acid, ionic, or molecular?	Molar Mass (M) g/mol
a)		Lithium sulfide		
b)		Calcium carbonate		
c)		Hydrochloric acid		
d)		Iron (III) sulfide		
e)		Cobalt (II) Chloride decahydrate		
f)		Calcium bicarbonate		
g)		Dinitrogen tetrahydride		
h)		Sodium phosphate		
i)		Sodium glutamate		
j)		Ammonium phosphate		
k)		Sulfur trioxide		
k)		diphosphorus pentaoxide		
l)	C ₂ H ₅ OH(l)			
m)	Al ₂ O ₃ (s)			
n)	NO ₂ (g)			
o)	Na ₂ SiO ₃ (s)			
p)	CH ₃ COOH(aq)			
q)	H ₂ S(g)			
r)	NH ₃ (g)			
s)	TiO ₂ (s)			
t)	C ₃ H ₈ (g)			

2.

	Formula	Molar Mass(g/mol)	Number of Moles (mol)	Mass (g)
a)	Na ₂ CO ₃ (s)		3.45 mol	
b)	CH ₄ (g)		234 mmol	
c)	CuSO ₄ 5H ₂ O (s)			4.56 kg
d)	Si F ₄ (g)			100. g

3.

	Formula	Structural formula	Molecular shape	Molecular polarity (p or np)	Intramolecular bonding (vdw, d-d, h)	Hybridization of the central atom
a)	CH ₂ O					
b)	PH ₃					
c)	CH ₂ Br ₂					
d)	HCN					
e)	SF ₆					

