Key

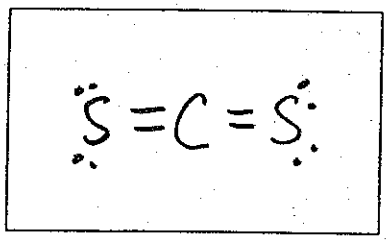
CHEMISTRY 11

Lewis Diagrams & Structures

Draw Lewis diagrams for each of the following compounds and determine their shape & polarity

1) SCS

Have	16
Need	24
Share	8
Bonds	4
nb	8

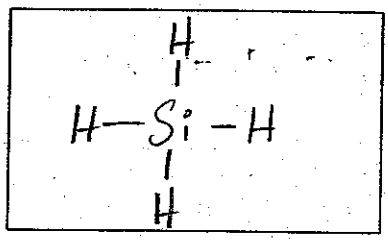


Shape = LINEAR

Polarity = None (non polar)

2) SiH_4

Have	8
Need	16
Share	8
Bonds	4
nb	0

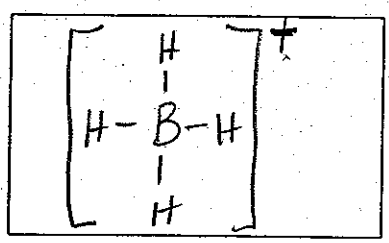


Shape = Tetrahedral

Polarity = Non polar.

3) BH_4^+

Have	6 (7-1)
Need	14
Share	8
Bonds	4
nb	0

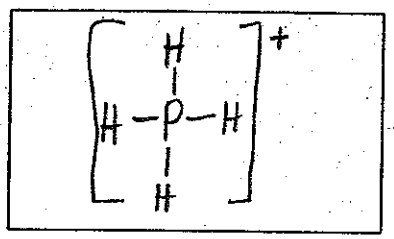


Shape = Tetrahedral

Polarity = polar (charged)

4) PH_4^+

Have	8 (9-1)
Need	16
Share	8
Bonds	4
nb	0

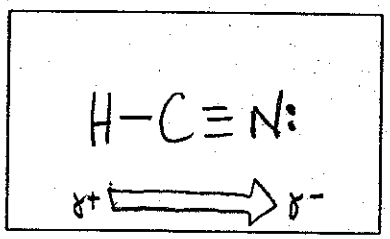


Shape = tetrahedral

Polarity = polar (charged)

5) HCN

Have	10
Need	18
Share	8
Bonds	4
nb	2



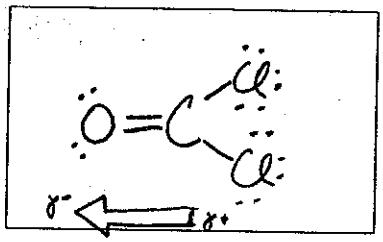
Shape = linear

Polarity = polar.

6) $OCCl_2$

Have	24
Need	32
Share	8
Bonds	4

nb 16



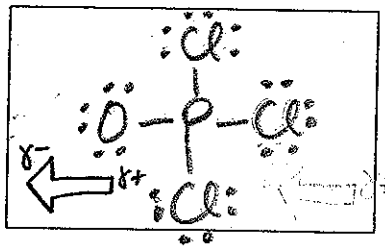
Shape = Trigonal Planar

Polarity = polar

7) $OPCl_3$

Have	32
Need	40
Share	8
Bonds	4

nb 24



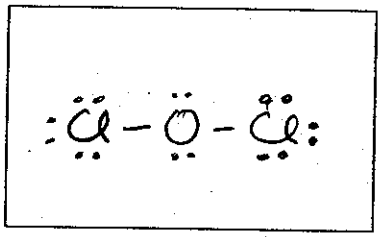
Shape = tetrahedral

Polarity = polar

8) Cl_2O

Have	20
Need	24
Share	4
Bonds	2

nb 16



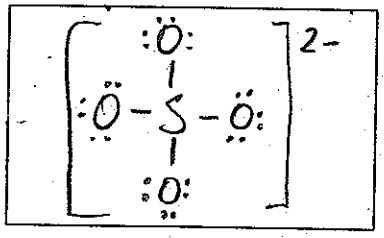
Shape = Angular

Polarity = polar

9) SO_4^{2-}

Have	32
Need	40
Share	8
Bonds	4

nb 24



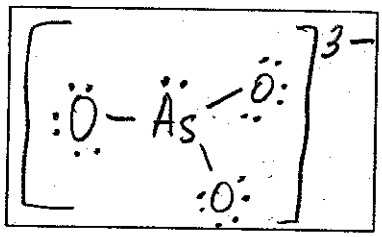
Shape = tetrahedral

Polarity = polar (charged)

10) AsO_3^{3-}

Have	26
Need	32
Share	6
Bonds	3

nb = 20



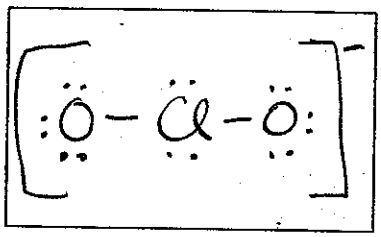
Shape = Trigonal Pyrimidal

Polarity = polar (charged)

11) ClO_2^-

Have	20
Need	24
Share	4
Bonds	2

nb 16



Shape = Angular

Polarity = polar (charged)