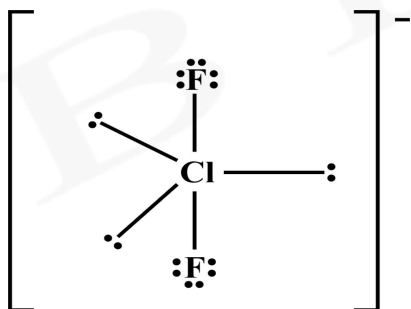
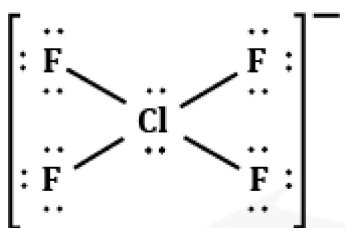


1. The shape of ions $[ClF_4]^-$ and $[ClF_2]^-$ respectively is-

- ☐ A. See-saw and linear
- ☐ B. See-saw and bent
- ☐ C. Tetrahedral and linear
- ☒ D. Square planar and linear

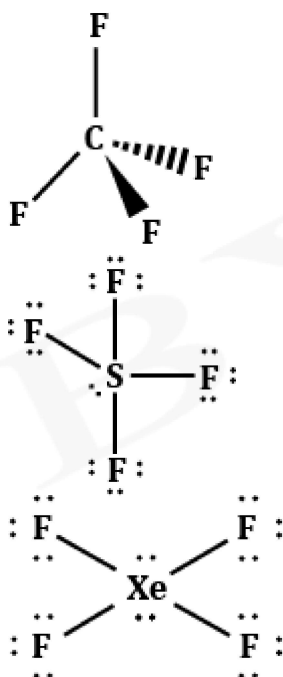
Compound	Bond pair	Lone pair	structure
$[ClF_4]^-$	4	2	Square planar
$[ClF_2]^-$	2	3	linear



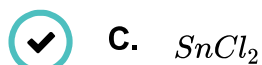
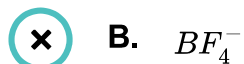
2. Molecular shape of CF_4 , SF_4 and XeF_4 are-

- ☒ A. The same, with 2, 0 and 1 lone pair of electrons respectively
- ☒ B. The same, with 1, 1 and 1 lone pair of electrons respectively
- ☒ C. Different, with 0, 1 and 2 lone pair of electrons respectively
- ☒ D. Different, with 1, 0 and 2 lone pair of electrons respectively

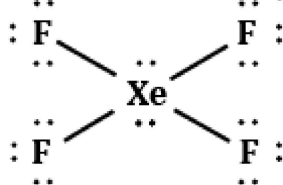
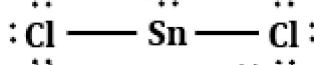
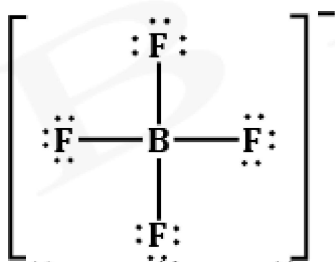
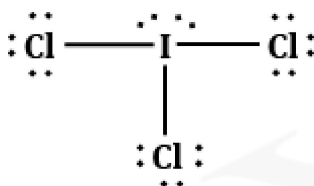
Species	central atoms	valance electrons	bonds	lone pairs	structure
CF_4 ,	C	4	4	0	tetrahedral
SF_4 ,	S	6	4	1	see-saw
XeF_4 ,	Xe	8	4	2	square planar



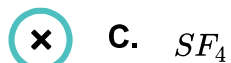
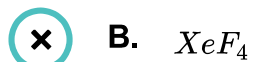
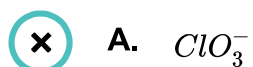
3. Which of the following molecules/species have minimum number of lone pairs?



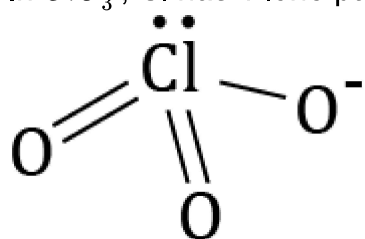
Compound	lone pairs
ICl_3	11
BF_4^-	12
$SnCl_2$	7
XeF_4	14



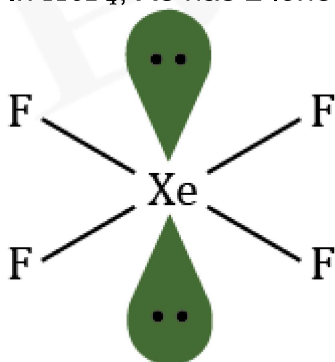
4. Which species has maximum number of lone pair of electron in central atom?



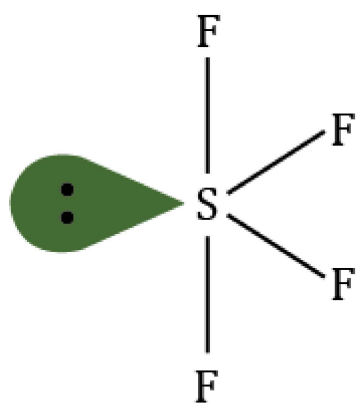
In ClO_3^- , Cl has 1 lone pair .



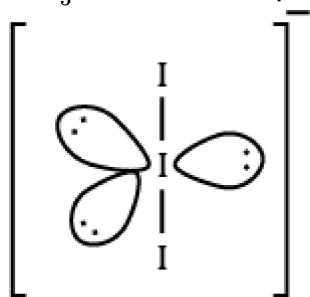
In XeF_4 , Xe has 2 lone pair .



In SF_4 , S has 1 lone pair .



In I_3^- , I has 3 lone pair .



5. XeF_2 is isostructural with-

☐ A. TeF_2

☒ B. ICl_2^-

☐ C. $SbCl_3$

☐ D. $BaCl_2$

In XeF_2 , Xe is sp^3d hybridised it means geometry is Trigonal bipyramidal. 3 lone pairs on equatorial position to minimise repulsion and 2 F atoms at axial position thus shape is linear.

(a) TeF_2 six electrons in valence shell.

(b) In ICl_2^- , I is sp^3d hybridised it means geometry is Trigonal bipyramidal. 3 lone pairs on equatorial position to minimise repulsion and 2 Cl atoms at axial position thus shape is linear.

(c) In $SbCl_3$, Sb is sp^3 hybridised it means geometry is tetrahedral, but due to lone pair shape is pyramidal.

(d) $BaCl_2$ is an ionic compound.

