Lewis Structures and VSEPR Model

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Draw the Lewis structure showing the formal charges. At each central atom, determine the electronic arrangement, and molecular geometry for the following compounds. Include all resonance structures and show the resonance hybrid structure:

(a) CO_3^{2-}

(b) SO_3

(c) I_3^-

(d) SF_5^-

(f) XeF ₄		
(g) CHF ₃		
(h) O ₃		
(i) HCCH		
(j) CHONH ₂		
(k) PF ₆		

(e) CH₂FCH₂COOH

Number of electron pairs	Electron pair geometries: 0 lone pair	1 lone pair	2 lone pairs	3 Ione pairs	4 Ione pairs
2	X E X X				
3	X 120° X X X	 X E X <120° Bent or angular			
4	X E X Tetrahedral	X X X X X X X 109° Trigonal pyramid	X E X <<109° Bent or angular		
5	X X 90° 120° E X X X Trigonal bipyramid	<pre><90°X X</pre>	X SEXX X T-shape	X 180° X Linear	
6	X 90° X E X X E X X Octahedral	X < 90° X X X < 90° X X X X X X X X X X X X X X X X X X X	Y X E X X Square planar	X E X X < 90° T-shape	X 180° X Linear