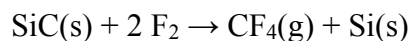


1. The K_{sp} for PbI_2 (lead iodide) is 8.5×10^{-9} . What is the molar solubility of PbI_2 ? (***Show your set-up—including a balanced chemical equation—and your work.***)

2. Carbon tetrafluoride (CF_4) is synthesized from silicon carbide and fluorine according to this balanced equation:



When 100 g of SiC and 100 g of F_2 are combined, what is the maximum number of grams of CF_4 that can form? $M(SiC) = 40.1 \text{ g/mol}$; $M(F_2) = 38.0 \text{ g/mol}$; $M(CF_4) = 88.0 \text{ g/mol}$.

3. Complete the following tables:

given:	write:
<i>(example)</i> permanganate	MnO_4^-
sulfate	
carbonate	
chlorate	
ammonium	

given:	write:
phosphate	
CN^-	
NO_2^-	
NO_3^-	
hydroxide	

4. Complete the following tables:

given:	write:
CH_3OCH_3	<i>(Lewis structure)</i>
CH_3COCH_3	<i>(Lewis structure)</i>

given:	write:
acetic acid (formula $\text{C}_2\text{H}_4\text{O}_2$)	<i>(any structural representation)</i>
HCCH	<i>(Lewis structure)</i>

5. A 0.040-L sample of 0.050 M NaCl has how many moles of Na^+ ? of Cl^- ?
6. Write the net ionic equation for a solution of sodium phosphate mixing with a solution of barium chloride to form a white precipitate. ***Put a BOX around your answer.***
7. What is the empirical formula of the mineral called ***galena***? It is 13.4% sulfur (symbol S) and 86.6% lead (symbol Pb).