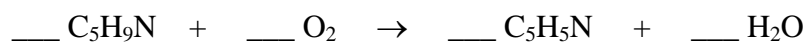


1 (10 points in total). When the following reaction consumes 23.4 moles of oxygen, how many moles of C_5H_5N are produced? What would the concentration of the C_5H_5N be if it were dissolved in 2.000 cubic meters of water?



/10

2 (10 points in total for 2a + 2b). For each of the following compounds, write out the equation defining the solubility product for each of these solids in an appropriate solvent.

2a (5 points for this part). **Li₂S**

2b (5 points for this part). **Ca₃(PO₄)₂**

/10

3 (10 points in total). For the following system, calculate the pH of the solution. If 2.40 Kg of HI are dissolved in 210 L of water, what is the pH?

/10