Mole	Stoichio	ametry

Balance the skeleton equations. Solve the stoichiometry problems using the mole ratios. All work must be shown. Draw a box around your answer.

1. $\underline{\hspace{1cm}} H_2(g) + \underline{\hspace{1cm}} O_2(g) \rightarrow \underline{\hspace{1cm}} H_2O(g)$

How many moles of hydrogen are needed to completely react with 2.00 moles of oxygen gas?

2. ____ Mg (s) + ____ $O_2(g) \rightarrow$ ___ MgO (s)

How many moles of magnesium oxide are produced when 9.00 moles of oxygen gas are reacted?

3. ____ Fe (s) + ___ HCl (aq) \rightarrow ___ FeCl₂(aq) + ___ H₂(g)

How many moles of iron (II) chloride are produced from the complete reaction of 4.50 moles of iron?

How many moles of oxygen are necessary to react completely with 3.50 moles of hydrogen gas?

5.	$Pb(NO_3)_2 (aq) +$	$-$ NaCl (aq) \rightarrow	$\underline{\hspace{1cm}}$ PbCl ₂ (s) +	NaNO ₃ (aq)
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How many moles of lead (II) chloride are produced when 0.650 moles of sodium chloride react completely?

How many moles of oxygen will be produced when 0.475 moles of hydrogen peroxide breaks down completely?

7. _____ CaO (s) + _____
$$P_2O_5(g) \rightarrow$$
 _____ Ca₃(PO₄)₂ (s)

How many moles of calcium phosphate are produced when 0.125 moles of calcium oxide react completely?