Name: _____ Period: _____ Assigned on Tuesday, May 12, 2026

18.2 Limiting Reactant Practice **Due Friday, May 15, 2026**

Show your work for all calculations!

1) You react 3 moles of sodium and 3 moles of chlorine gas

_____Na + _____Cl_2 _____NaCl

a) How many moles of sodium chloride *could* be made from the sodium sample?
WORK:

b) How many moles of sodium chloride *could* be made from the chlorine gas sample?
WORK:

c) Which reactant limits how much sodium chloride you can make? _____

d) How many moles sodium chloride can you make from the given reactants? **Moles NaCl_____**

2) You have 1.0 mole of Al and 2.0 moles Cl_2

_____Al(s) + _____Cl_2 (g) _____$AlCl_3$ (s)

a) What is the limiting reactant?_____What is the excess reactant?_____
WORK:

b) How many moles of product can be made?_____

c) How many moles of the excess reactant are used to produce the product? _____
WORK:

3) You have 27g of sodium and 32g of chlorine gas.

_____Na + _____Cl_2 _____NaCl

a) What limits how much sodium chloride you can make? (You will need to calculate the mass of NaCl that could be produced twice...once starting with the mass of Na and once starting with the mass of Cl_2.)
Limiting Reactant_____
WORK:

b) What mass of sodium chloride can you make? **NaCl (g)**_____
c) How many grams of the excess reactant reacted in the reaction?
WORK:

4) You combine 50.0 g of Al and 50.0 g of Cl_2

_____Al(s) + _____Cl_2 (g) → _____$AlCl_3$ (s)

a) What is the limiting reactant?_____What is the excess reactant?_____

WORK:

b) How many grams of aluminum chloride can be made?_____

c) How many grams of the excess reactant will react during the reaction?_____

WORK:

d) What mass of excess reactant will be left over after the reaction reaches completion?

WORK:

5) You react 14.2g of bromine liquid with 25.1 g of lithium iodide.

a) Write a balanced chemical equation for this reaction

b) What type of reaction is this?:_____

c) What is the limiting reactant when producing lithium bromide in this reaction?_____

WORK:

d) What is the theoretical yield of the lithium bromide?_____

e) What is the % yield if when the reaction is carried out, the experimental yield is 8.30 g?