Unit 4: Chemical Reactions

Lesson 21: Mole too Much!

Guiding Question: Explain the process for determining the amount of one substance given the amount of another in a chemical reaction.

Do Now:

What is the molar mass of $PbCl_2$?

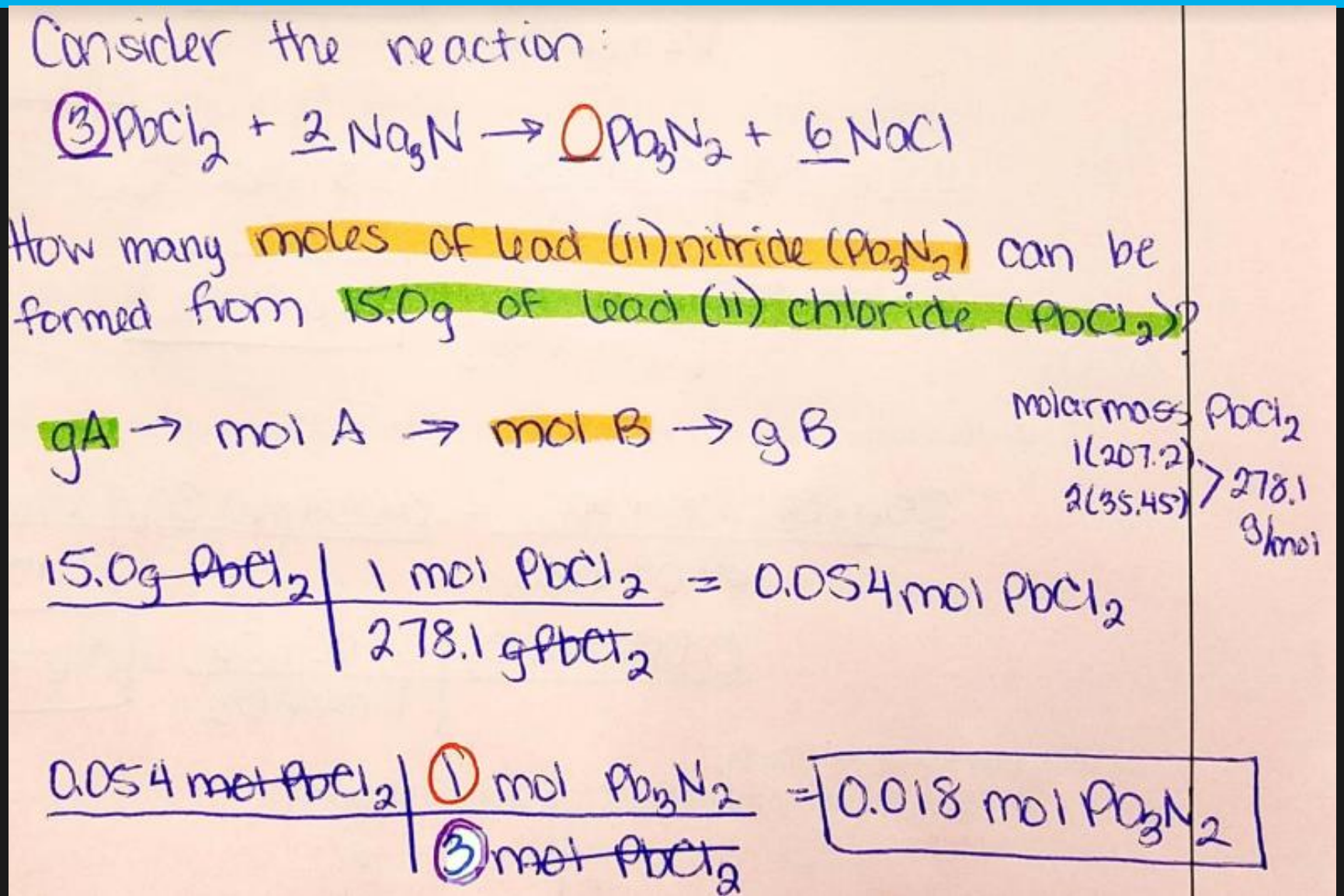
Notes

- Consider the reaction:

$$\_3\_\ PbCl_2 + \_2\_\ Na_3N \rightarrow \_\_\_ Pb_3N_2 + \_6\_\ NaCl$$

How many moles of lead (II) nitride (Pb_3N_2) can be formed from 15.0g lead (II) chloride ($PbCl_2$)?

Notes


Consider the reaction:
3 PbCl2 + 2 Na3N → 1 Pb3N2 + 6 NaCl
How many moles of lead (II) nitride (Pb3N2) can be formed from 15.0g of lead (II) chloride (PbCl2)?
gA → mol A → mol B → g B
Molar mass PbCl2
1(207.2)
2(35.45)
278.1 g/mol
15.0g PbCl2 | 1 mol PbCl2 / 278.1 g PbCl2 = 0.054 mol PbCl2
0.054 mol PbCl2 | 1 mol Pb3N2 / 3 mol PbCl2 = 0.018 mol Pb3N2

Closure

- Answer Guiding Question on page 23.
  - All pages (not 19-22) should be done and stamped .
- Workbooks due at Benchmark #3
- Benchmark #3 on 3/28 & 3/29
- Quiz #2 & #3 Corrections: today and tomorrow after school

- Hang in there….we’re almost to Spring Break!