

Stoichiometry Flow Chart and Problem Setup

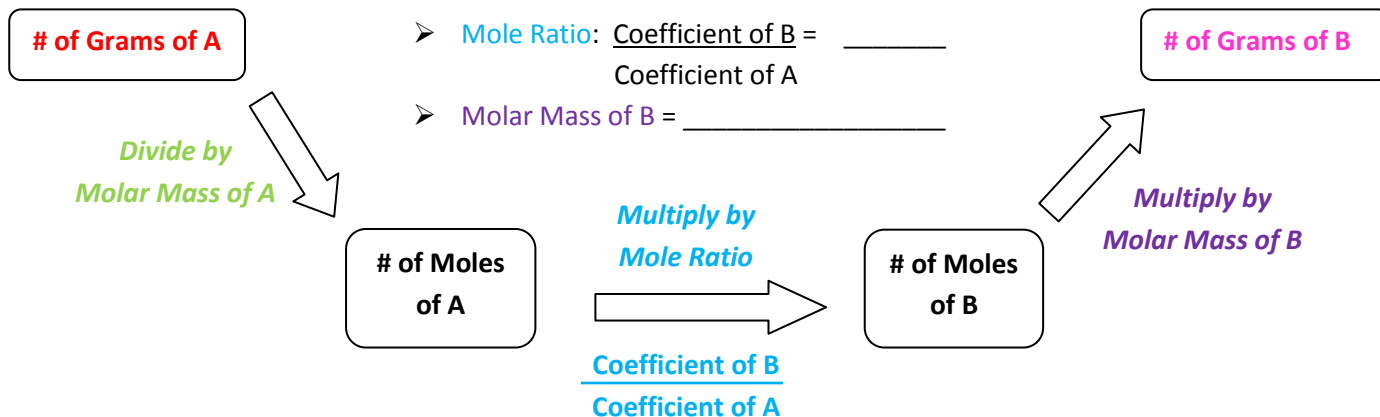
If you have X grams of A, how many grams of B can you make?

KNOWN = A

UNKNOWN = B

THINGS TO FIND OUT BEFORE STARTING

- Grams told to you of A = _____
- Molar Mass of A = _____
- Mole Ratio: $\frac{\text{Coefficient of B}}{\text{Coefficient of A}} =$ _____
- Molar Mass of B = _____



DIMENSIONAL ANALYSIS SET UP:

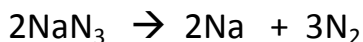
Grams of A	1	Coefficient of B	Molar Mass of B	= Grams of B
1	Molar Mass of A	Coefficient of A	1	

UNIT CANCELING:

g of A	1 mole of A	moles of B	g of B	= g of B
1	g of A	moles of A	1 mole of B	

Note: In the original image, red dashed lines indicate the cancellation of 'g of A', '1 mole of A', 'moles of B', and '1 mole of B'. The final 'g of B' and 'g of B' are circled in red.

EXAMPLE:



If you have 3.8 grams of NaN_3 , how many grams of Na can you make?

Known (A) = _____ Unknown (B) = _____

THINGS TO FIND OUT BEFORE STARTING

- Grams told to you of A = _____
- Molar Mass of A = _____
- Mole Ratio: $\frac{\text{Coefficient of B}}{\text{Coefficient of A}} =$ _____
- Molar Mass of B = _____

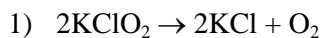
_____	_____	_____	=
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Practice Stoichiometry Problems

THINGS TO FIND OUT BEFORE STARTING

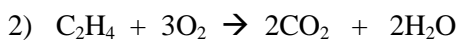
- Known = ? and Unknown = ?
- Grams told to you of A
- Molar Mass of A
- Mole Ratio: $\frac{\text{Coefficient of B}}{\text{Coefficient of A}}$
- Molar Mass of B

Grams of A	1	Coefficient of B	Molar Mass of B	=	Grams of B
1	Molar Mass of A	Coefficient of A	1		



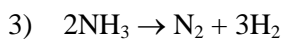
If you start with 11.2 grams of KClO_2 , how many grams of O_2 can you make?

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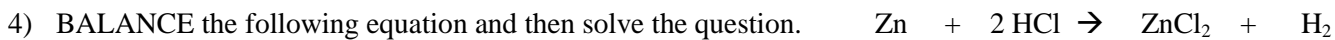
If you start with 0.65 kilograms of O_2 , how many grams of H_2O can be produced? (Don't forget to convert to grams first!)

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You perform the reaction above. You end up making 27.3 grams of H_2 . How many grams of NH_3 did you start with? (Even though this seems like the opposite of the other problems, do it the exact same way!)

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If you start with 4.2 kg of HCl , how many MOLES of ZnCl_2 can you make?