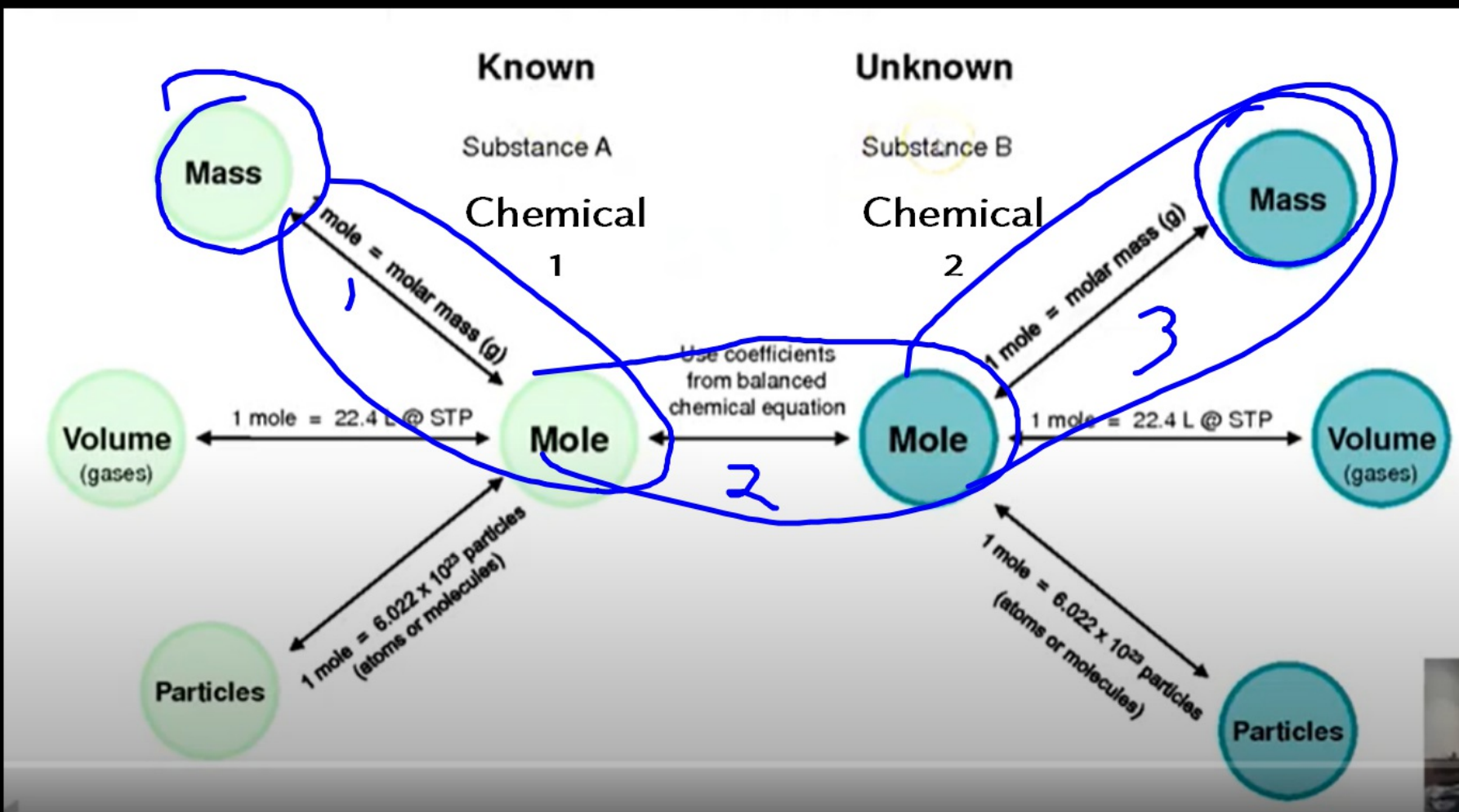# 6.1.20

Stoichiometry: Grams to Grams

Today's Objectives:

- Recap mole to mole slides
- Use the big mole roadmap
- Add steps before and after to learn grams to grams
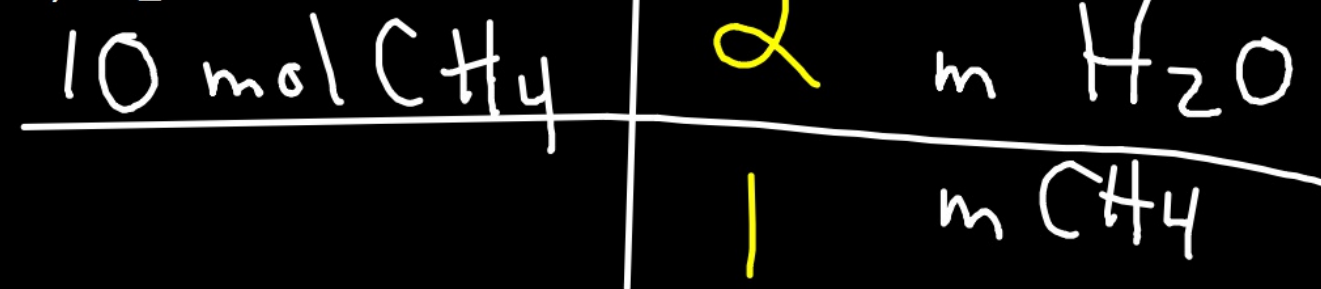
Big Mole Roadmap

Moles to Moles (1 Step)

1 CH_4 + 2 O_2 --> 1 CO_2 + 2 H_2O

1. 10 moles of CH_4 will produce how many moles of...

a) H_2O?

$$\frac{10 \text{ mol } CH_4}{} \times \frac{2 \text{ m } H_2O}{1 \text{ m } CH_4} = \boxed{20 \text{ moles } H_2O}$$

b) CO_2?

Grams to Grams (3 Steps)

$$1 \; CH_4 + 2 \; O_2 \rightarrow 1 \; CO_2 + 2 \; H_2O$$

100 grams of CH_4 will yield how many grams of H_2O?

PT   Coeff.

100g CH₄	1 $\dfrac{m}{CH_4}$	2 $\dfrac{m}{H_2O}$	18 g H₂O	225
16 g CH₄	1 $\dfrac{m}{CH_4}$	1 $\dfrac{m}{H_2O}$		g H₂O

PT

C : 12 × 1 = 12
H · 1 × 4 : 4
       /16