Combustion

_____ + _____ → Products + _____

Most commonly

$C\_H\_$ + _____ → __ ___ + ___ + ___

or

$C\_H\_$ + _____ → __ ___ + __ __ + ___ + ___ + _____

<u>Complete combustion</u>

- Only __ ___ and ___ formed.
- N_2 is _____-_____.
- Enough ___ supplied to convert **all** __ and __ to CO_2 and H_2O.

<u>Model for air</u>

For _____ air (by volume)

Component	_____ fraction
O_2	
N_2	

Dalton's other model strikes again!

or

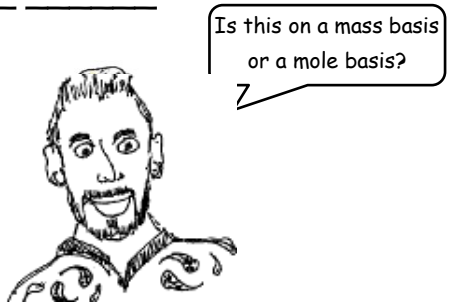
__ _____ O_2 + __.____ _____ N_2 = __.__ __ _____ Air

Remember M_{air} = ____.____ kg/kmol

Stoichiometric reaction

- Complete combustion. Plus no _____ __
- The correct amount of air needed for above is

  _____ or _____ _____
- More or less air is
  - % _____ air
  - % _____ air
  - % _____ air, etc.



Air-fuel ratio

AF = _____ = _____

FA = _____ = _____

Equivalence ratio

Φ = _____

Φ < __ → "Lean"

Φ > 1 → "_____"

Balancing chemical reactions

It's just _____ _____ _____!

You remember how to do it from CHEM101, yes?