TODAY ① Balancing equations
12-MAY competition (starter).

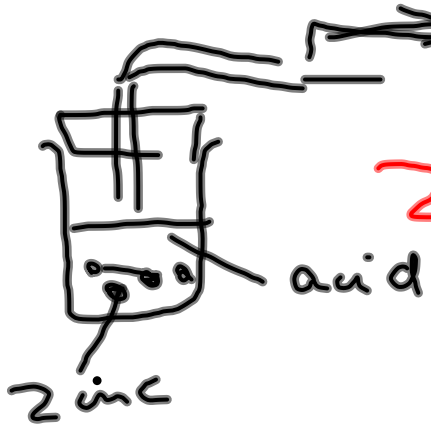
② (Again) titration calculation.

③ Reacting masses and yield.

Unknown concentration of Calcium hydroxide $Ca(OH)_2$ solution — 20 cm^3 is found to be neutralised by 12 cm^3 of 0.5M HCl. What was $[Ca(OH)_2]$?

① Write a balanced equation.
② How many moles of HCl?
③ How many moles of $Ca(OH)_2$?
④ What was $[Ca(OH)_2]$?

Zinc + Hydrochloric acid → Zinc Chloride + Hydrogen gas.



$Zn + 2HCl \rightarrow ZnCl_2 + H_2$

24 cm^3 of H_2

0.5M HCl.

What mass of zinc reacted?

Gay-Lussac

$Ar_{Zn} = 65.4$ g

$Ar_H = 1$

1/1000 md.

0.0654 g

Rust (Fe_2O_3) can be got rid of by treating iron railings with carbon monoxide (CO) gas, turning it into iron.

Ar = 55.8 Fe
Ar = 16 O

$$Fe_2O_3 + CO \longrightarrow Fe \quad CO_2$$

If we had an rusty railing weighing 5.3kg how much would the pure iron railing weigh?

1. Balanced eqtn
2. Moles of Fe_2O_3?
3. Moles of Fe? 4. Mass of Fe?