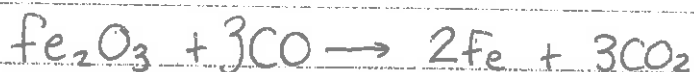


Calculations from Equations

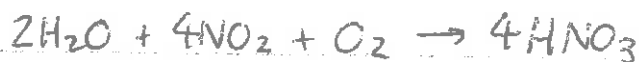
① what mass of calcium oxide could be obtained by heating 25g of Limestone, CaCO_3 ?

② In the blast furnace, haematite Fe_2O_3 is converted to iron:



what mass of iron can be obtained from 16 tonnes of iron oxide?

③ what mass of nitric acid can be produced from 1 tonne of nitrogen gas?

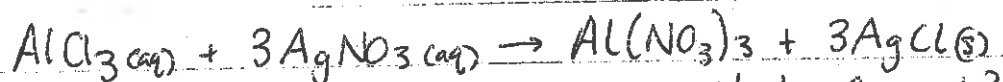


- ④ Titanium is manufactured by heating titanium(IV) chloride with sodium



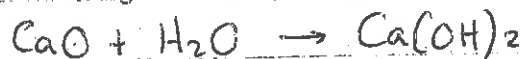
What mass of sodium is required to produce 1 tonne of titanium?

- ⑤ 2.67g of aluminium chloride was dissolved in water and an excess of silver nitrate solution was added to give a precipitate of silver chloride:



What mass of silver chloride precipitate would be formed?

- ⑥ Calcium hydroxide is manufactured by heating calcium carbonate strongly to produce calcium oxide, and then adding a controlled amount of water to produce calcium hydroxide:



a) What mass of water would you need to add to calcium oxide to produce 1 tonne of calcium carbonate?

b) What mass of calcium hydroxide would you ultimately produce from 1 ~~tonne~~ tonne of calcium carbonate?