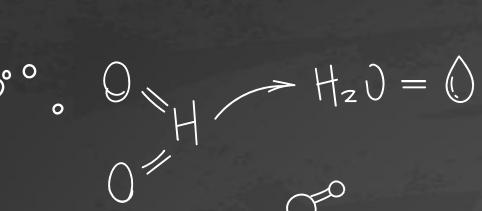
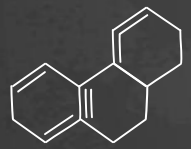
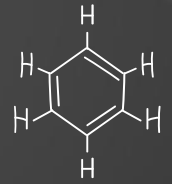
Chemistry - 101

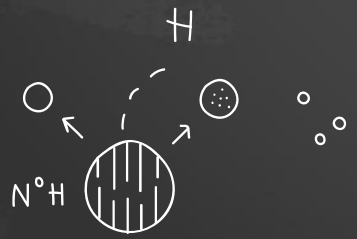
Classes of chemical compounds

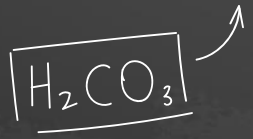
05/09/21

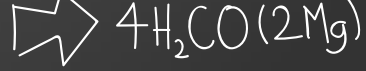












HW

Answer: 71 kg P_2O_5

98 kg

$$P_2O_5 + 3\,H_2O \rightarrow 2\,H_3PO_4$$

142 kg

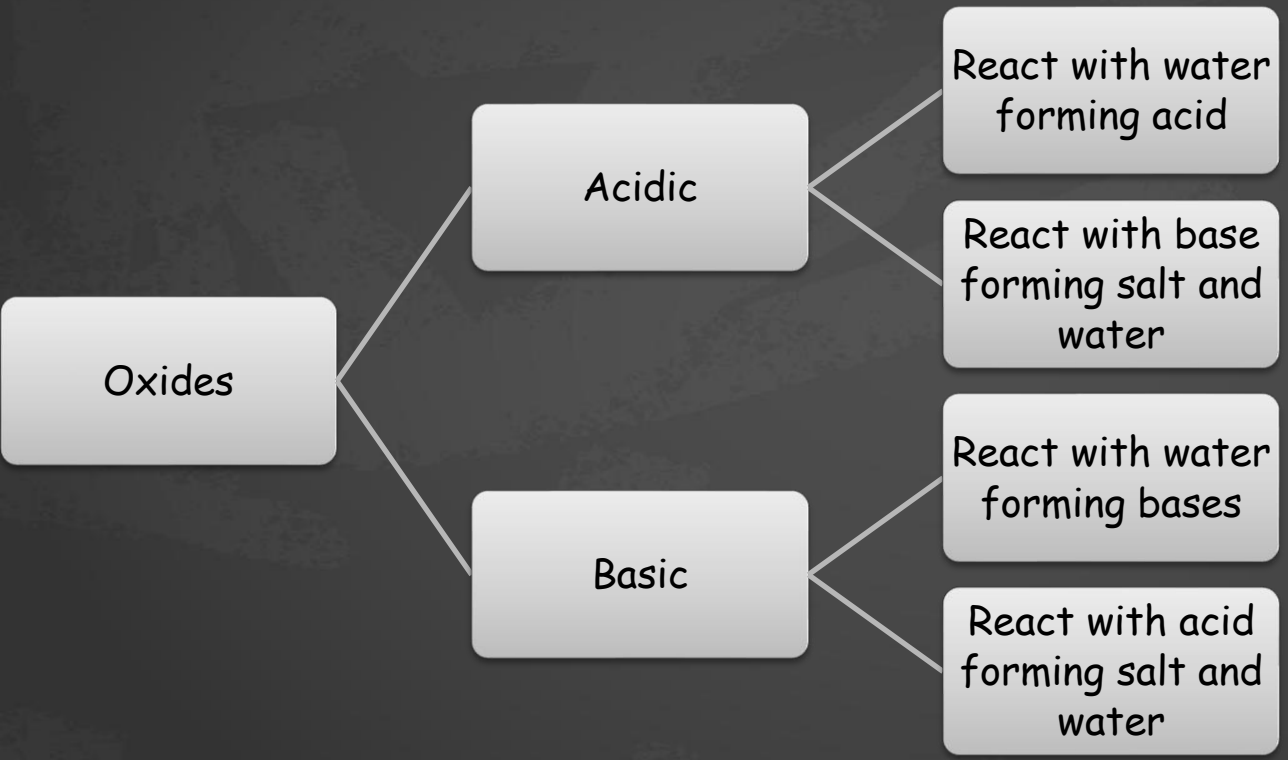
2x98 kg

Mw P = 31
Mw O = 16
Mw H = 1

Mw H_3PO_4 = 3x1 + 31 + 4x16 = 98

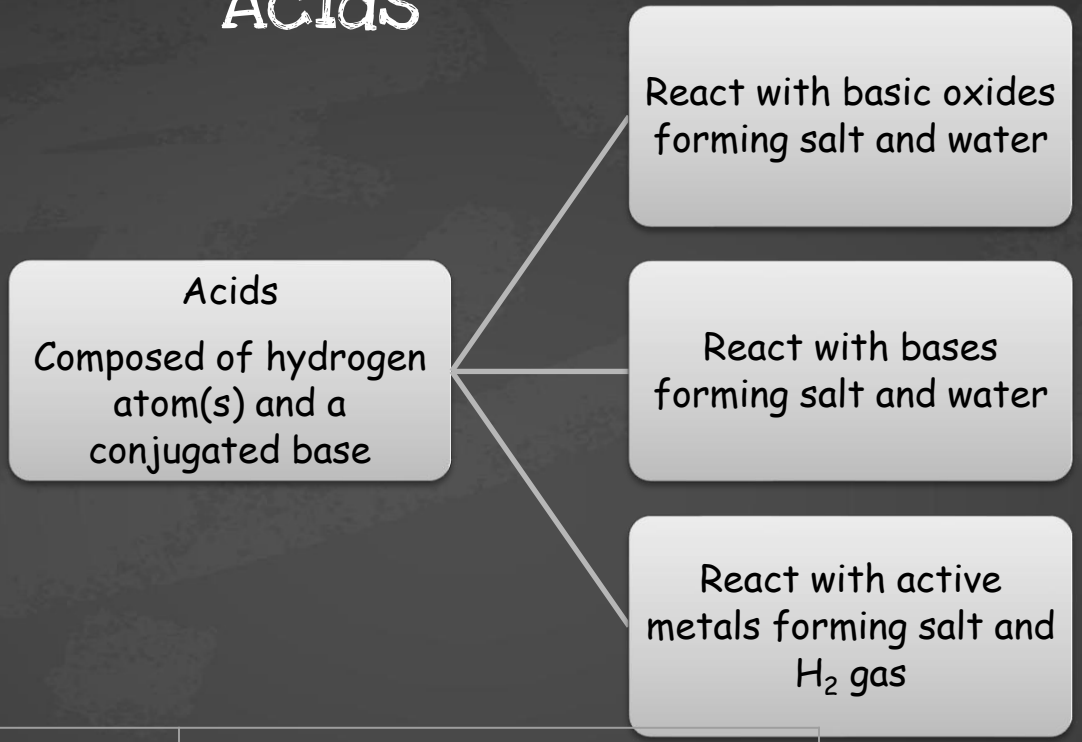
Mw P_2O_5 = 2x31 + 5x16 = 142

Oxides

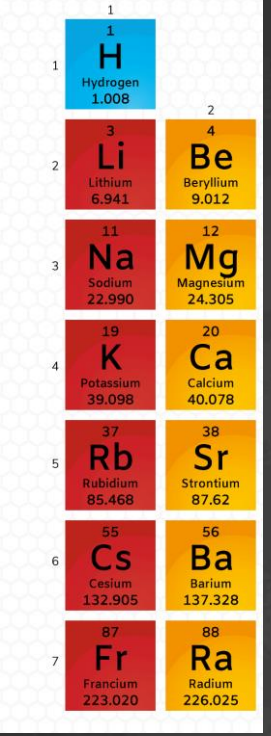


- Sulfur (IV) oxide SO_2
- Sulfur (VI) oxide SO_3
- Carbon (IV) oxide CO_2
- Calcium oxide CaO
- Iron (III) oxide Fe_2O_3
- Potassium oxide K_2O
- Magnesium oxide MgO

Acids



H_2SO_4 – sulfuric acid	HF – hydrofluoric acid
H_2SO_3 – sulfurous acid	HCl – hydrochloric acid
HNO_3 – nitric acid	HBr – hydrobromic acid
H_3PO_4 – phosphoric acid	HI – hydroiodic acid
H_2CO_3 – carbonic acid	H_2S – hydrosulfuric acid



Basis

Bases

Composed of metal atom(s) and hydroxyl group(s)

- React with acidic oxides forming salt and water
- React with acids forming salt and water
- Can decompose upon heating into basic oxide and water

This class uses the materials from the following books:
”

Manyuilov and Rodionov “Chemistry for children and adults”
Kuzmenko, Eremin, Popkov “Beginnings of chemistry”
http://school-collection.edu.ru (experiments)