

Reactions - 5 types

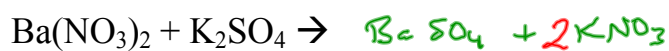
- identify type
- products
- balance
- if it occurs

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Double Displacement - 2 ionic compds
or acid

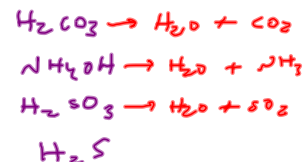
Charge of products...

charge never

 Δ_s +2
↓

Double displacement reactions occur if... one product is

- water
- insoluble
- gas



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Single Displacement — element + ionic acid

Charge of products...



BOLD choice!



H O F Br I N Cl
P₄ S₈

thermite



Single displacement reactions occur...

to put the more active element into the compd.

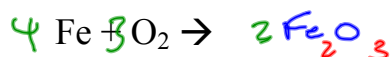
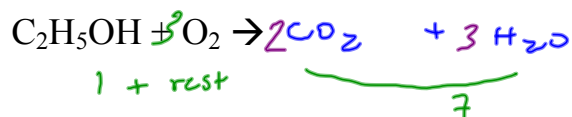
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Combustion ? + O₂

Charge of metal containing products...



highest charge

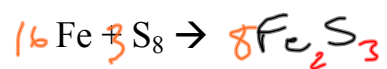
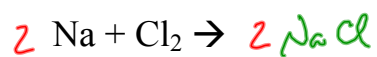


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Synthesis

 \longrightarrow one thing

Change of products...

Bold choice

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Decomposition

one \longrightarrow more

Change of products...



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Special Case Decomposition

Charge of products...

Charge
doesn't
△



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Special Case Decomposition

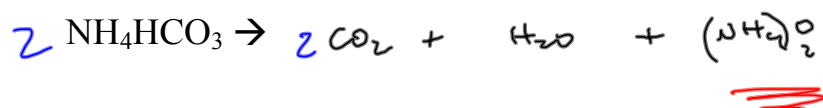
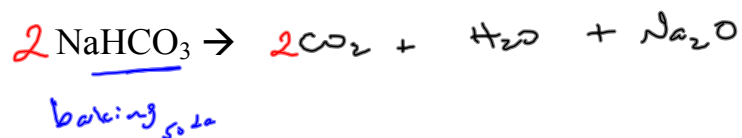
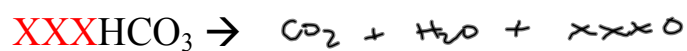
Charge of products...



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Special Case Decomposition

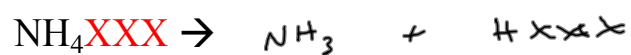
Charge of products...



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Special Case Decomposition

Charge of products...



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Stoichiometry

When 32.6 g of barium nitrate are reacted with sodium phosphate, how many molecules of the insoluble product are produced?



$$32.6 \text{ g Ba}(\text{NO}_3)_2 \times \frac{1 \text{ mole}}{261.34 \text{ g}} \times \frac{1 \text{ Ba}_3(\text{PO}_4)_2}{3 \text{ Ba}(\text{NO}_3)_2} \times \frac{6.022 \times 10^{23} \text{ mc}}{1 \text{ mole}} = 2.50 \times 10^{22} \text{ mc Ba}_3(\text{PO}_4)_2$$

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