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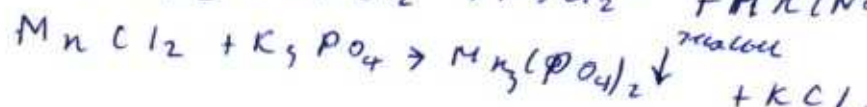
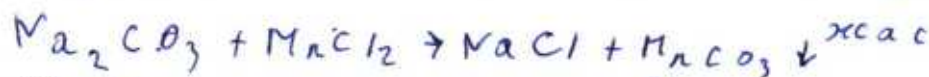
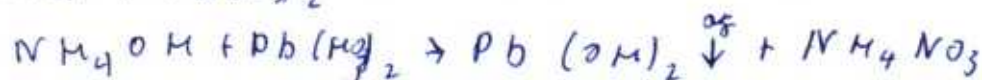
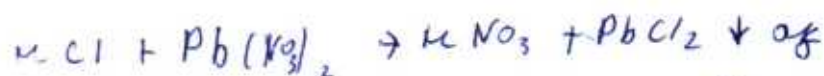
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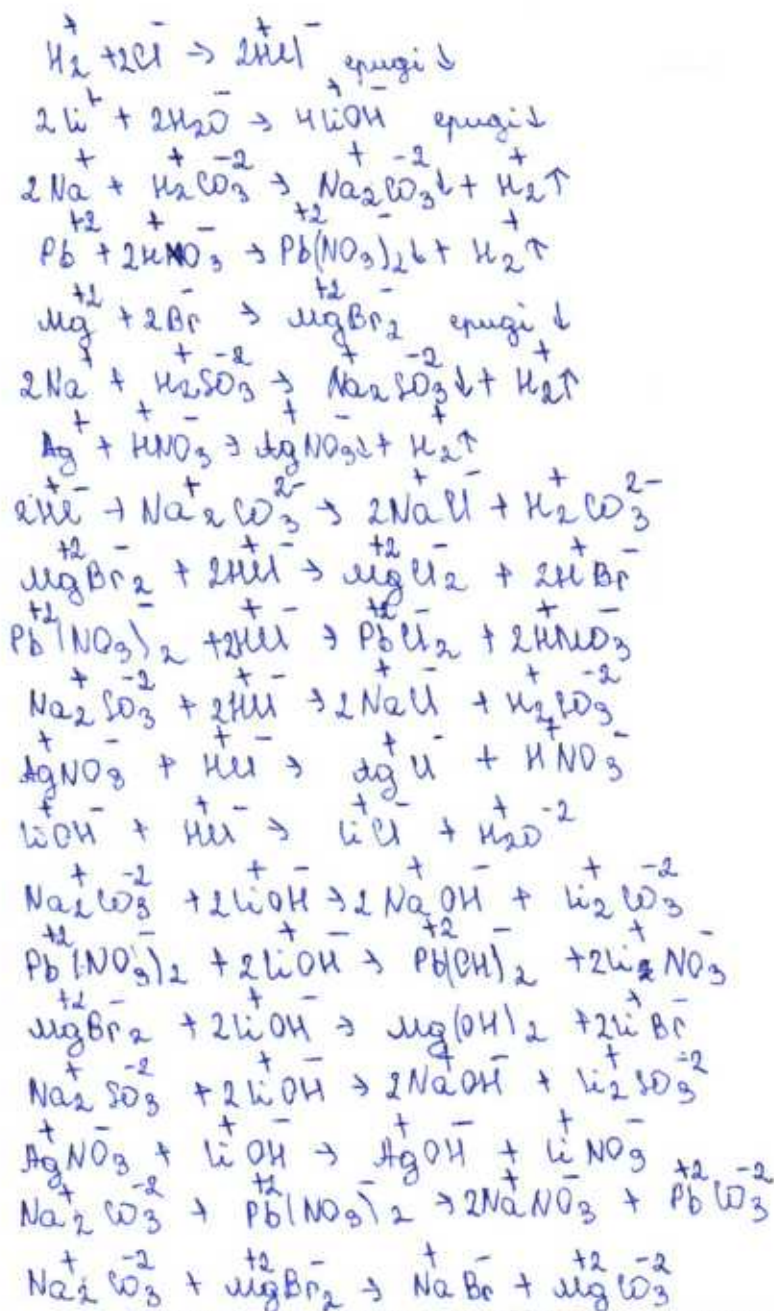
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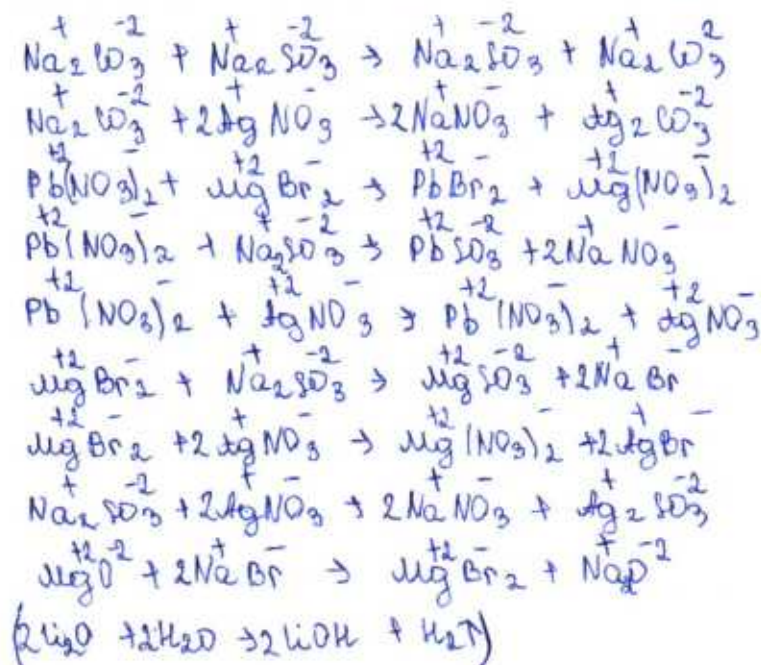


1. HI
2. LiOH
3. Na_2CO_3
4. $\text{Pb}(\text{NO}_3)_2$
5. MgBr_2
6. Na_2SO_3
7. AgNO_3



еңгид $\downarrow$

$\uparrow$ нағыз сәйкесі.

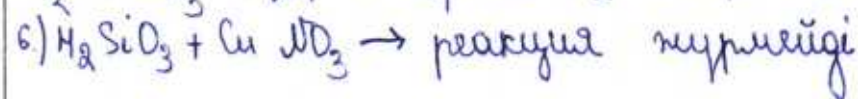
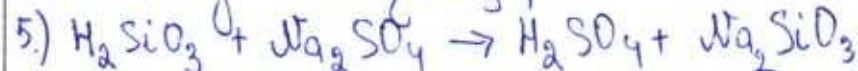
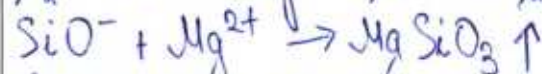
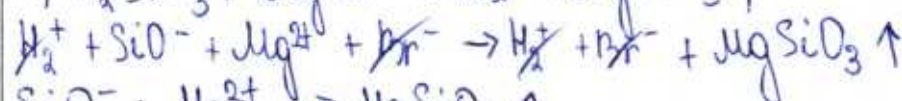
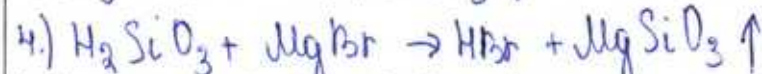
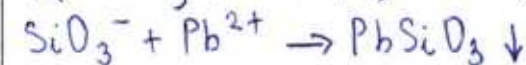
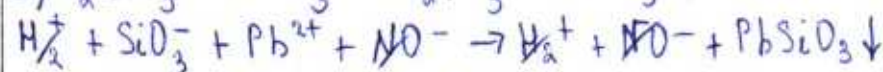
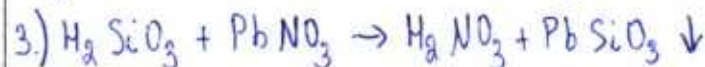
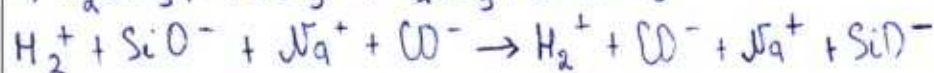
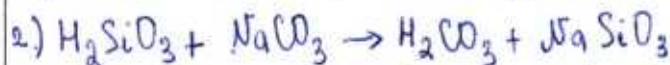
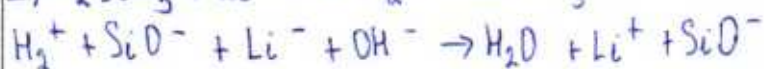
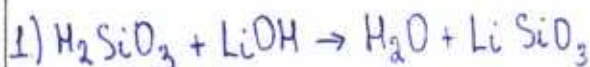


1) HCl , LiOH , NaClO_3 , MgBr_2

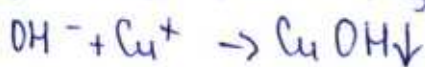
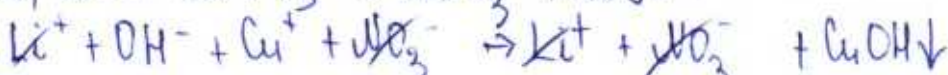
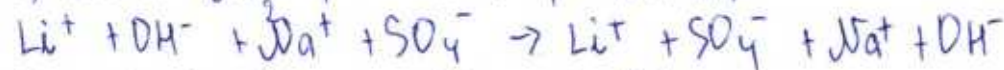
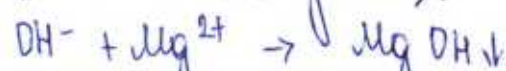
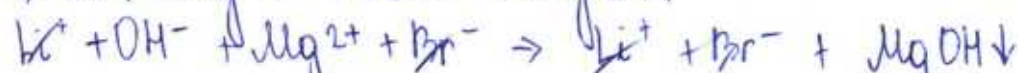
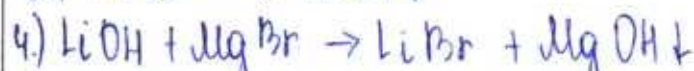
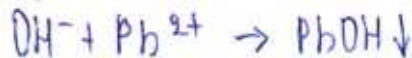
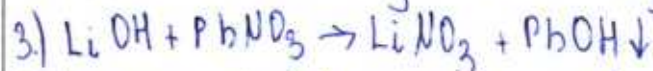
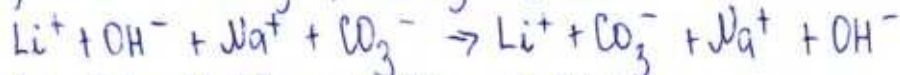
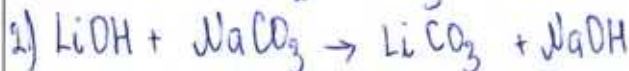
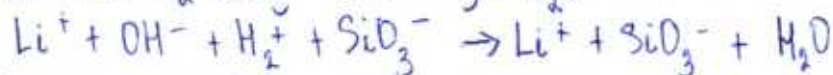
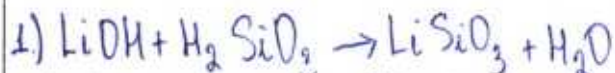
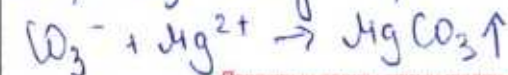
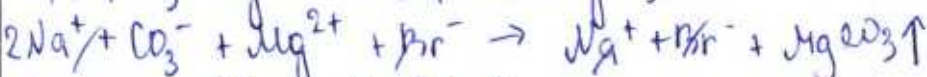
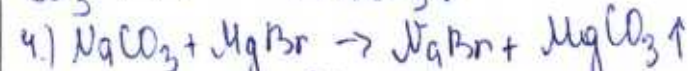
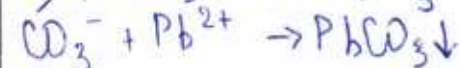
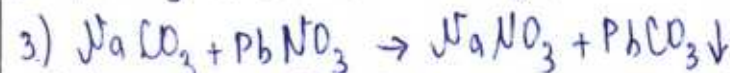
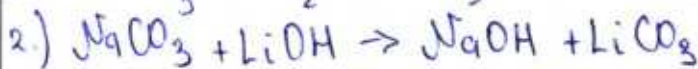
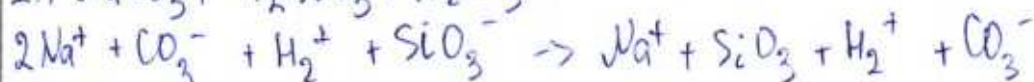
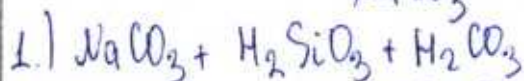
1)

	H_2SiO_3	$LiOH$	Na_2CO_3	$Pb(NO_3)_2$	$MgBr_2$	Na_2SO_4	$Cu(NO_3)_2$	□
H_2SiO_3	-			↓	↑			↑↓
$LiOH$		-		↓	↓		↓	↓↓↓
Na_2CO_3			-	↓	↓	(→)	-	↓↓↓
$Pb(NO_3)_2$	↓	↓	↓	-	↑	↑		↓↓↓↑↑
$MgBr_2$	-		↑	↑	-		-	↑↑
Na_2SO_4				↑		-		↑
$Cu(NO_3)_2$	-	↓	-	↓	-		-	↓

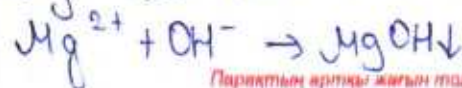
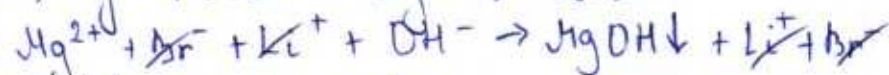
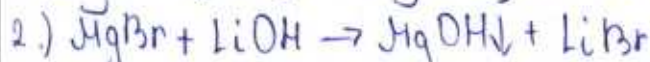
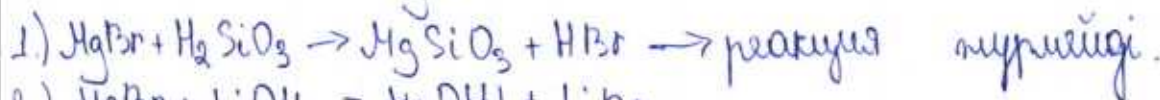
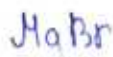
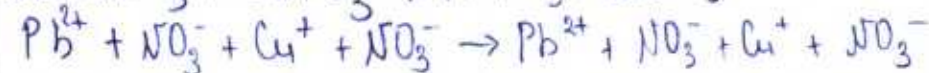
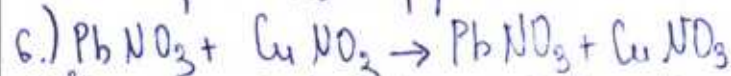
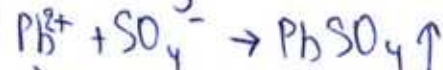
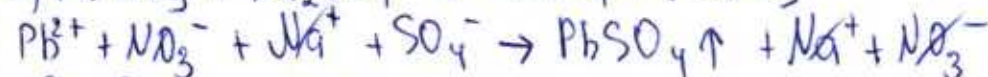
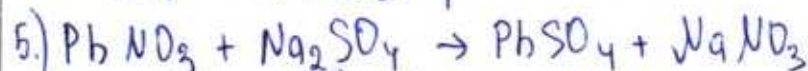
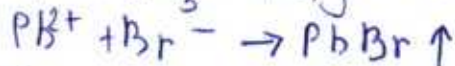
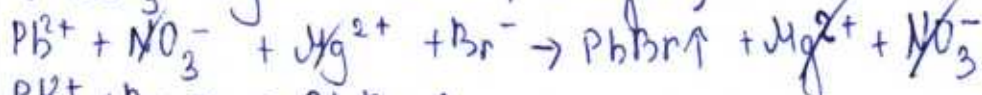
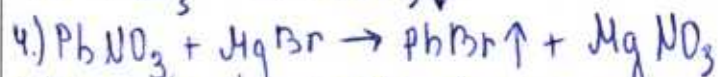
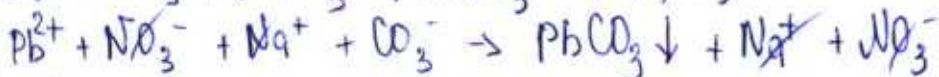
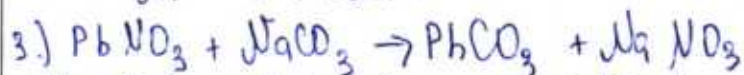
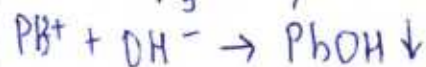
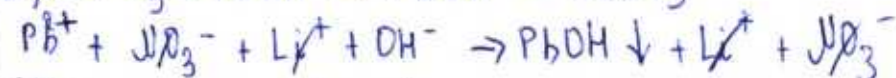
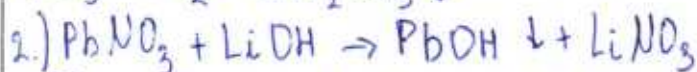
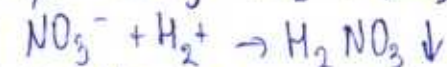
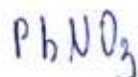
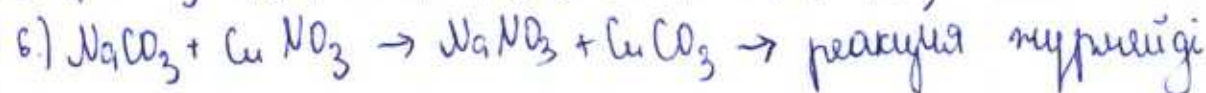
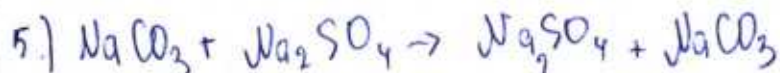
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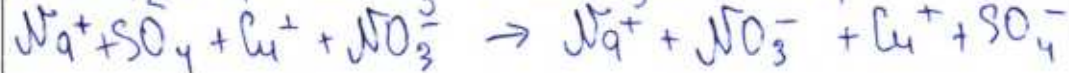
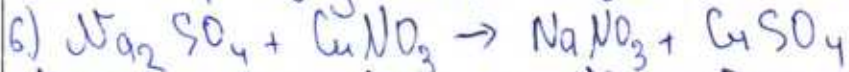
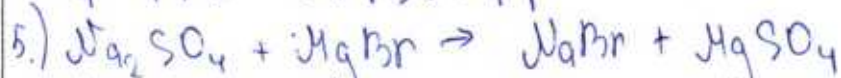
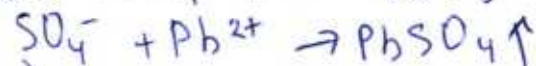
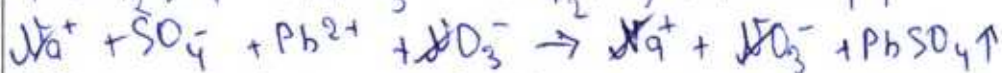
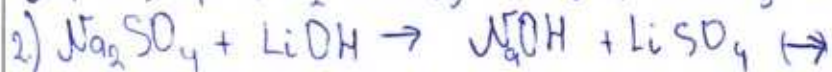
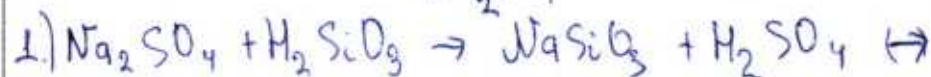
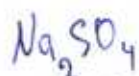
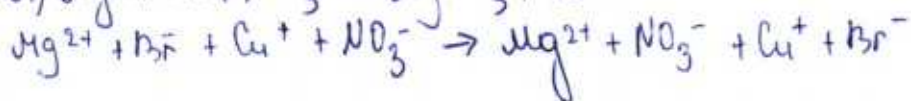
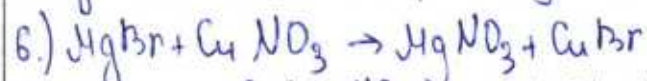
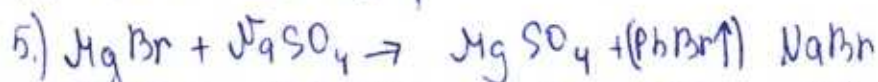
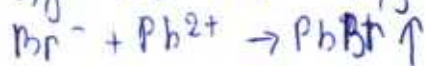
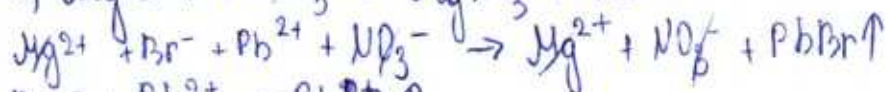
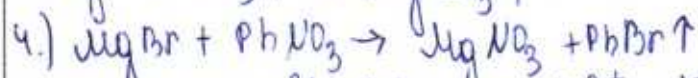
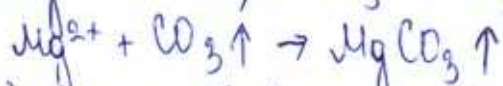
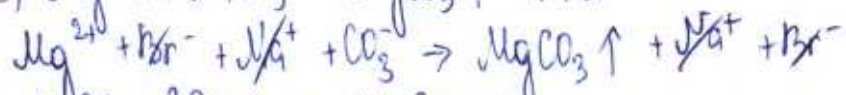
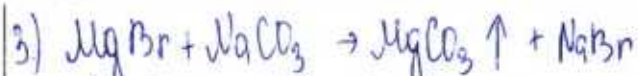


LiOH

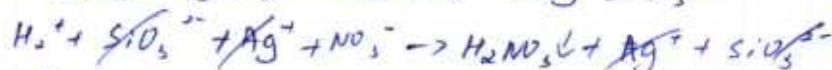
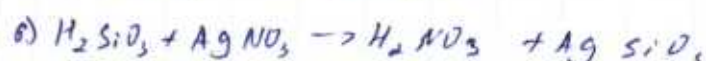
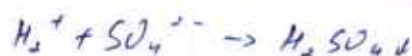
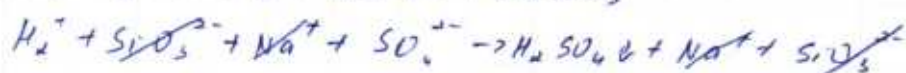
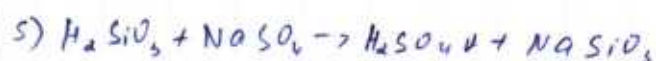
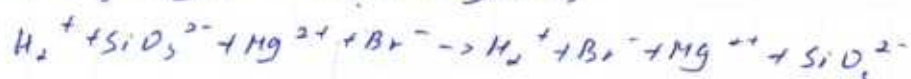
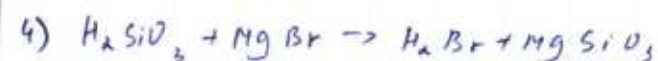
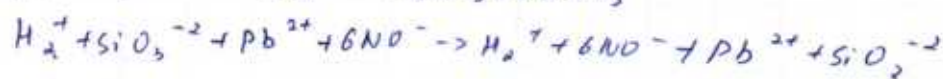
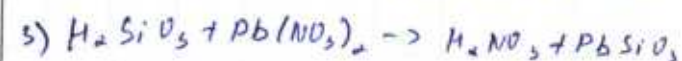
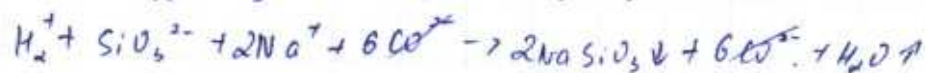
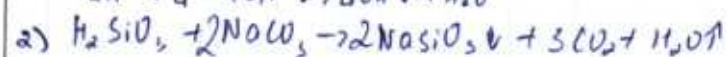
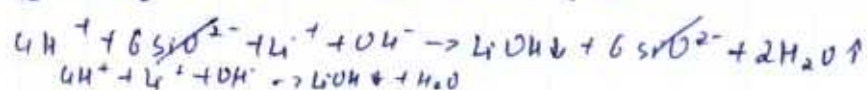
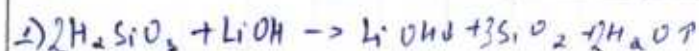
NaCO₃

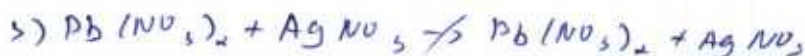
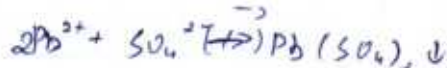
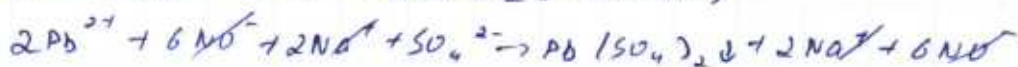
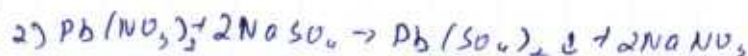
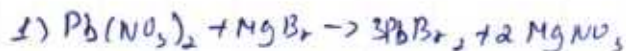
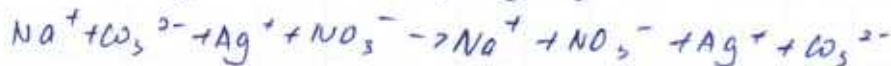
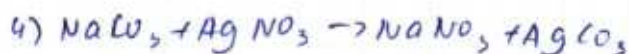
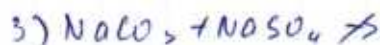
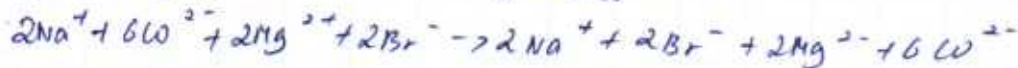
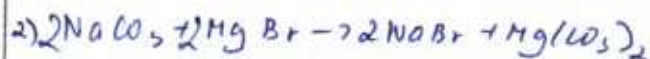
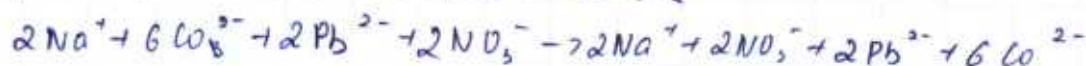
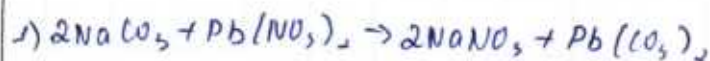
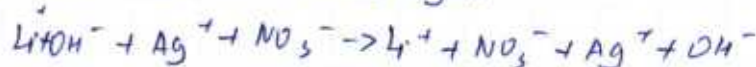
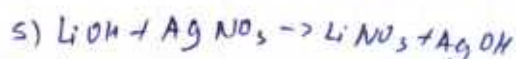
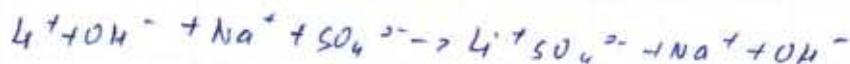
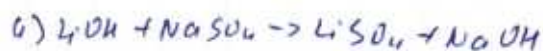
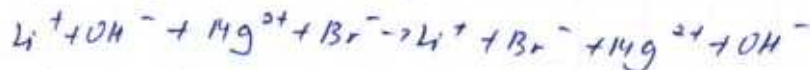
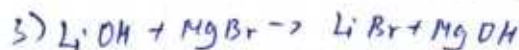
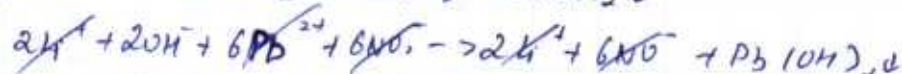
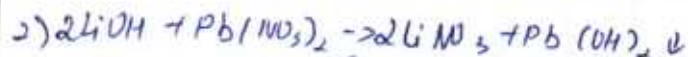
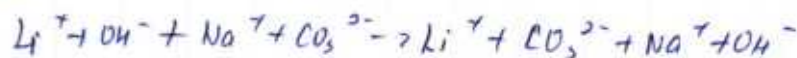
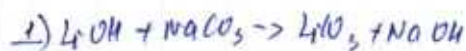
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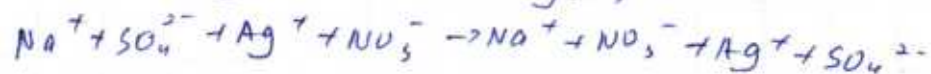
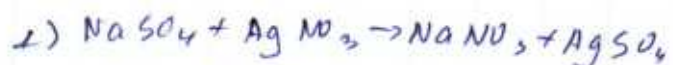
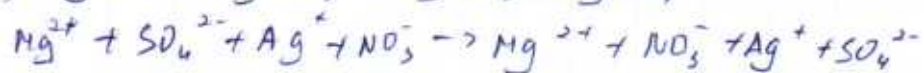
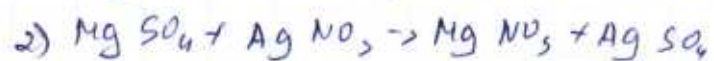
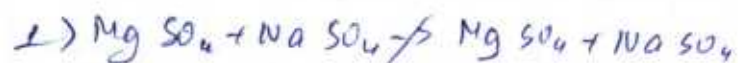




	H_2SiO_3	$LiOH$	$NaCO_3$	$Pb(NO_3)_2$	$MgBr$	$NaSO_4$	$AgNO_3$	Z
H_2SiO_3	—	↓	↓↑			↓	↓	↓↑↓↓
$LiOH$		—		↓				↓
$NaCO_3$	↓↑		—					↓↑
$Pb(NO_3)_2$		↓	↓	—		↓	—	↓↓
$MgBr$					—	—		
$NaSO_4$	↓			↓	—	—		↓↓
$AgNO_3$	↓			—			—	↓





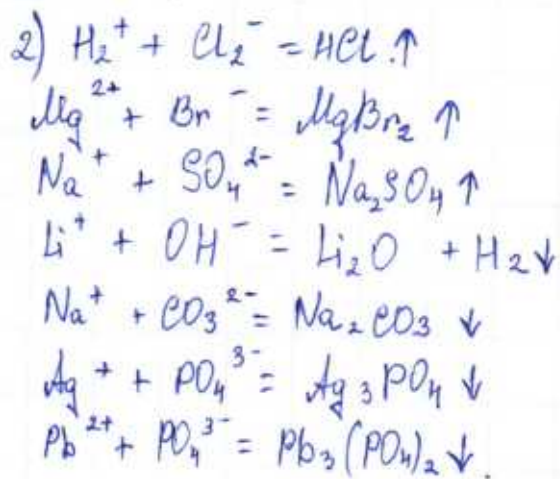


- 1) HCl - тұз қышқылы, ↓ тұссіз, - ериді (кристал болып сағала)
газ бөлінбейді.
 - 2) LiOH - литий гидроксиді, ↓ тұссіз, - ериді, - газ бөлінбейді.
 - 3) NaCO_2 - натрий карбонаты, ↓ сарғыш қоңыр, - суда ериді, - газ бөлін-
бейді.
 - 4) PbNO_3 - қорғасын нитраты, ↓ сұрауы түспес, - суда ериді, - газ бөлінбейді.
 - 5) ~~Na~~ MgBr - магний бромиді, қоңыр түспес, - суда ериді, - газ бөлінбейді.
 - 6) NaS^+ - натрий сульфиді, - сарғыш түспес, - суда ериді, - газ бөлінбейді.
 - 7) AgNO_3 - күміс нитраты, - сұрауы түспес, - суда ериді - газ бөлінбейді.
- молекуласының масса (M_r)

- 1) $M_r(\text{HCl}) \rightarrow 1 + 35,4 = 36,4$
- 2) $M_r(\text{LiOH}) \rightarrow 7 + 16 + 1 = 24$
- 3) $M_r(\text{NaCO}_2) \rightarrow 23 + 12 + 16 \cdot 2 = 67.$
- 4) $M_r(\text{PbNO}_3) \rightarrow 207 + 14 + 16 \cdot 3 = 269$
- 5) $M_r(\text{MgBr}) \rightarrow 24 + 80 = 104.$
- 6) $M_r(\text{NaS}) \rightarrow 23 + 32 = 55.$
- 7) $M_r(\text{AgNO}_3) \rightarrow 108 + 14 + 16 \cdot 3 = 170.$

1)

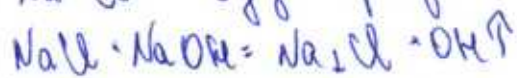
Базисі	Түз қосын. HCl	Литий гидрокс. $Li_2O + H_2$	Натрий карбонаты Na_2CO_3	Құрғақ литий тұздары $Pb_3(PO_4)_2$	Магний бромиді $MgBr_2$	Натр. сульфаты Na_2SO_4	Құрғақ литий тұздары Ag_3PO_4
Тұ. тұздары ↓ түзі			+				
Түзі және суға ерітін қосын. тұздары ↓ ерітін.		+		+			+
Газдар бөлінуі. ↑	+			+	+	+	



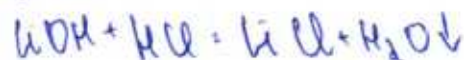
1) NaCl



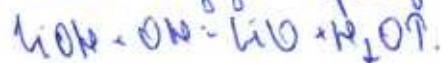
NaCl - суда еригі.



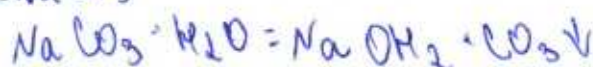
2) LiOH



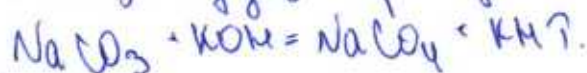
LiOH - суда еригі.



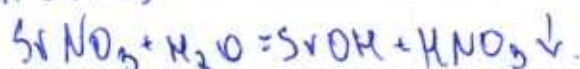
3) NaCO₃



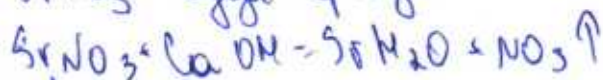
NaCO₃ - суда еригі.



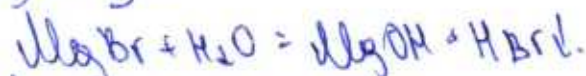
4) SrNO₃



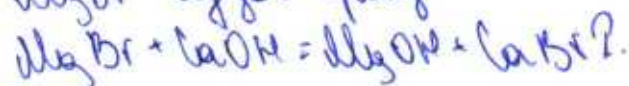
SrNO₃ - суда еригі.



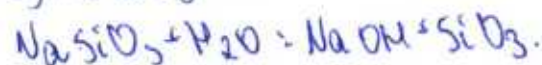
5) MgBr



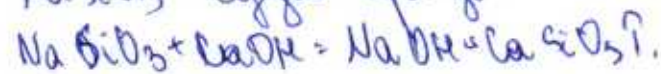
MgBr - суда еригі.



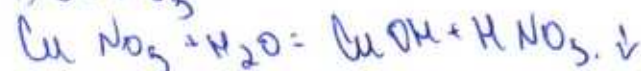
6) NaSiO₃



NaSiO₃ - суда еригі.

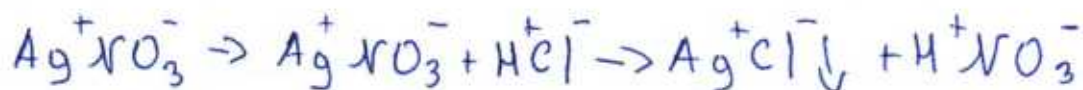
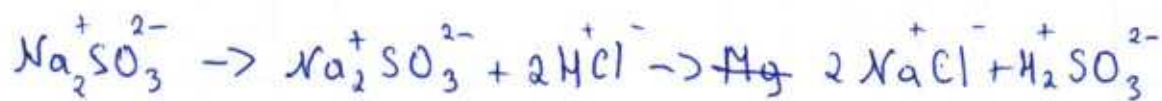
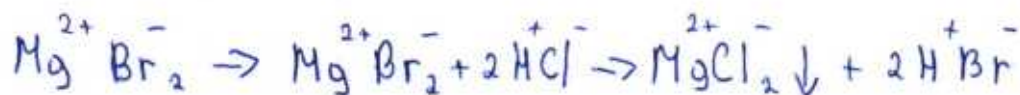
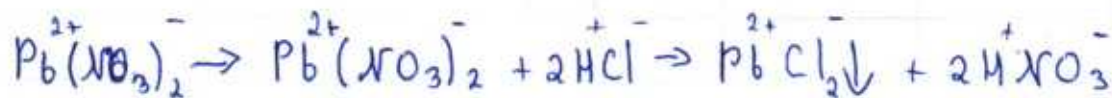
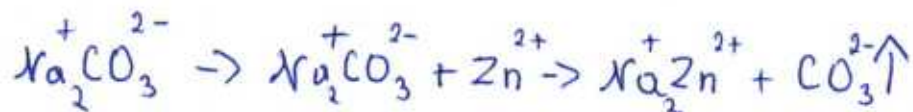
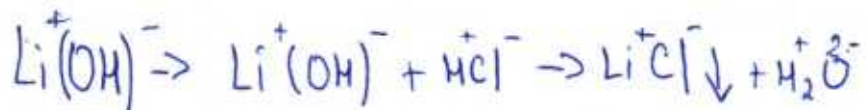
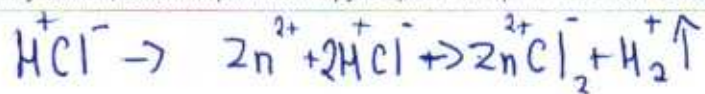


7) CuNO₃



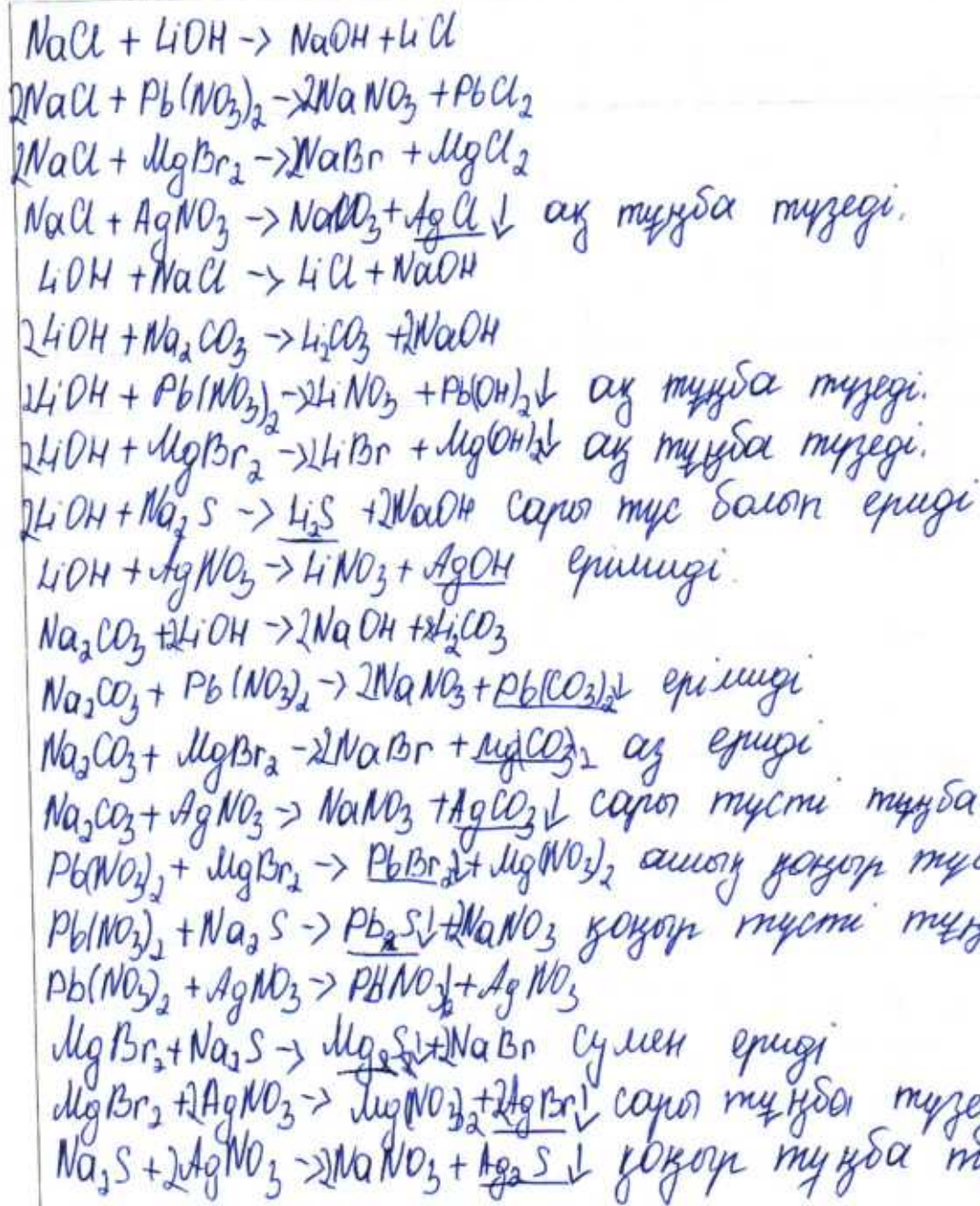
CuNO₃ - суда еригі.



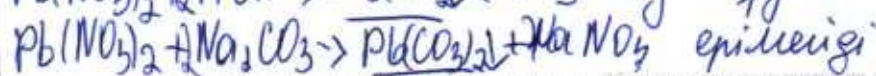
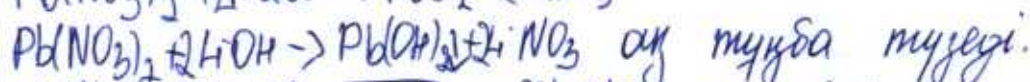
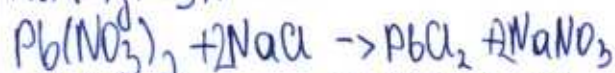


Тұз тұнғын	HCl	Еригеді ↓	түссіз	газ бөлінбеді ↑
Литий гидроксиді	LiOH	Еригеді ↓	қоңыр	газ бөлінбеді ↑
Натрий карбонаты	NaCO ₃	Еригеді ↓	таңқурай	газ бөлінбеді ↑
Қызыл нитрат	HgNO ₃	Еригеді ↓	таңқурай	газ бөлінбеді ↑
Магний бромиді	MgBr	Еригеді ↓	қоңыр	газ бөлінбеді ↑
Натрий сульфиді	NaS	Еригеді ↓	ашыл-қызғыл	газ бөлінбеді ↑
Күміс нитрат	AgNO ₃	Еригеді ↓	қоңыр	газ бөлінбеді ↑

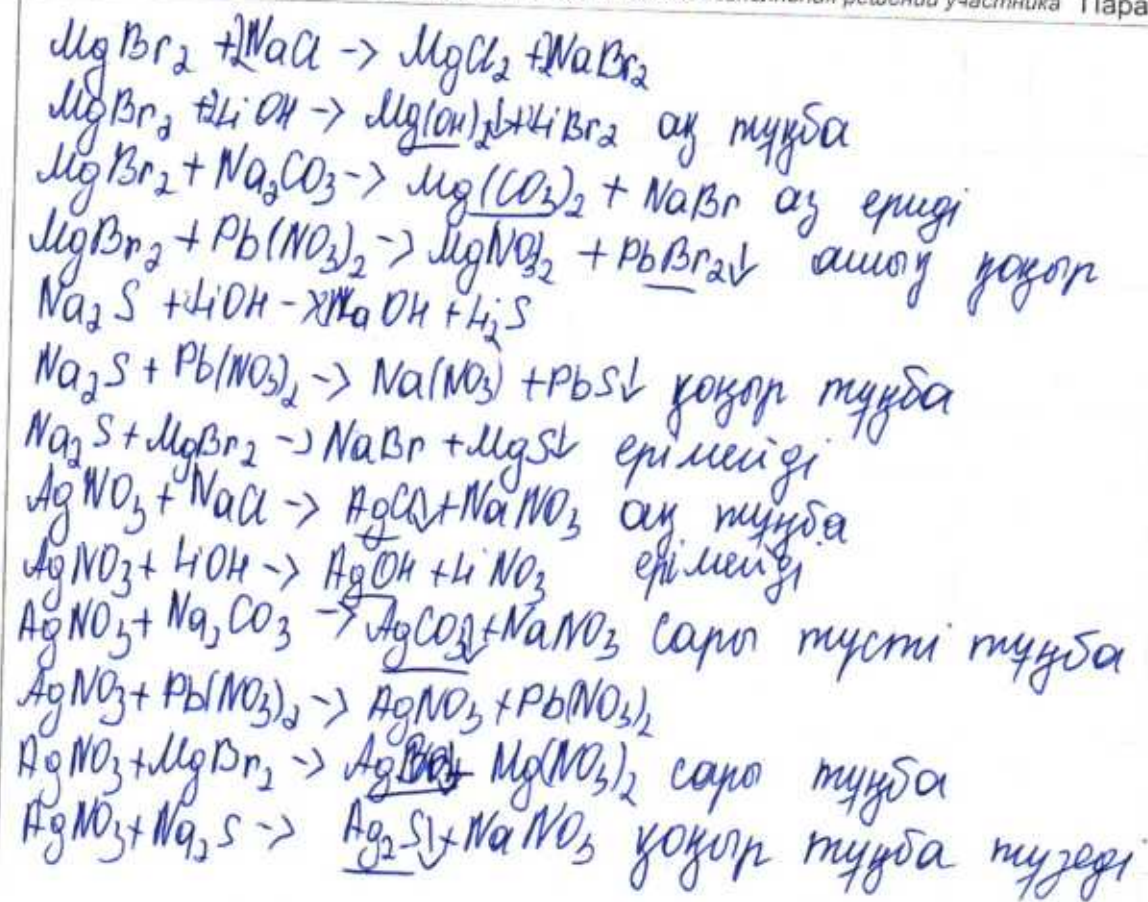
$HCl \rightleftharpoons HCl$	$M_r(HCl) = 1 + 17 = 18$	
$LiOH \rightleftharpoons LiOH$	$M_r(LiOH) = 3 + 8 + 1 = 12$	
$2Na^+CO_3^{2-} \rightleftharpoons 2NaCO_3$	$M_r(2NaCO_3) = 2 \cdot 11 + 6 + 8 \cdot 3 = 52$	$M_r(NaCO_3) = 11 + 6 + 8 \cdot 3 = 41$
$Hg^+NO_3^- \rightleftharpoons HgNO_3$	$M_r(HgNO_3) = 80 + 7 + 8 \cdot 3 = 111$	
$Mg^+Br^- \rightleftharpoons MgBr$	$M_r(MgBr) = 12 + 35 \cdot 2 = 82$	$M_r(MgBr) = 12 + 35 = 47$
$Na^+S^{2-} \rightleftharpoons NaS$	$M_r(2NaS) = 2 \cdot 11 + 16 = 38$	$M_r(NaS) = 11 + 16 = 27$
$Ag^+NO_3^- \rightleftharpoons AgNO_3$	$M_r(AgNO_3) = 47 + 7 + 8 \cdot 3 = 78$	

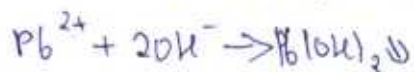
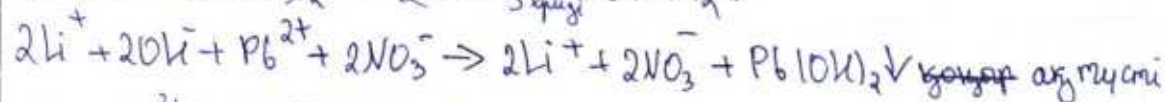
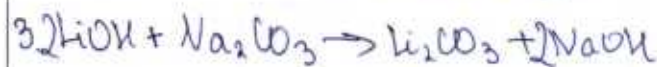
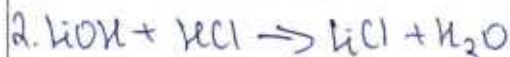
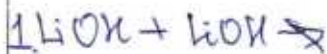
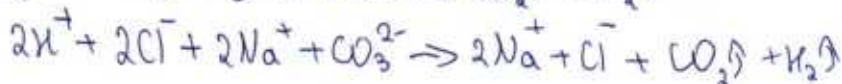
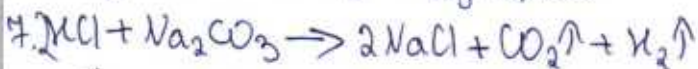
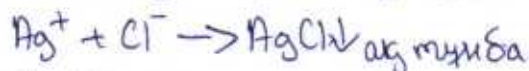
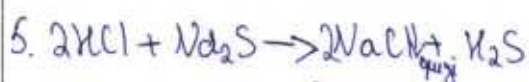
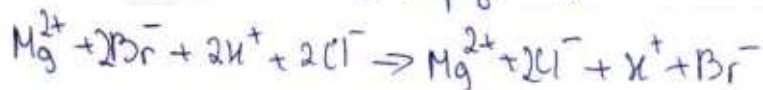
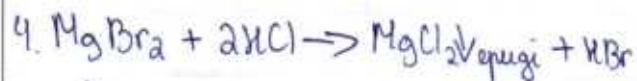
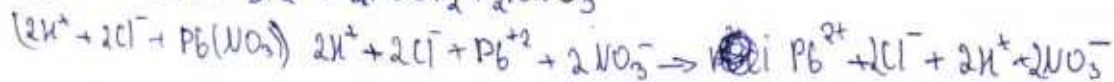
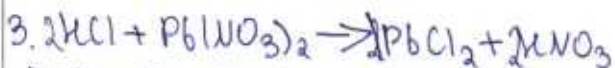
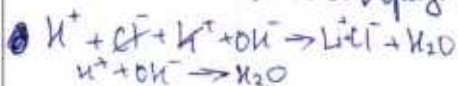
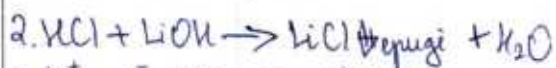
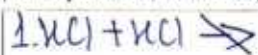


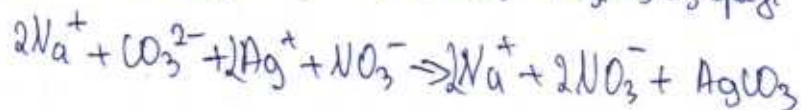
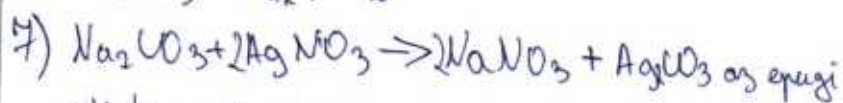
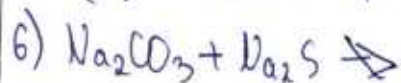
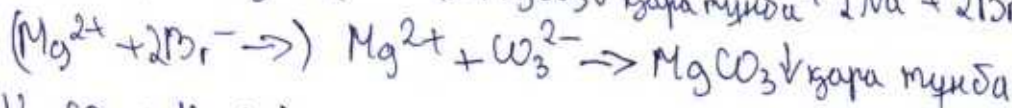
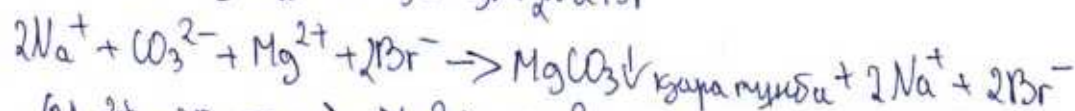
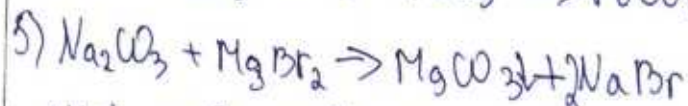
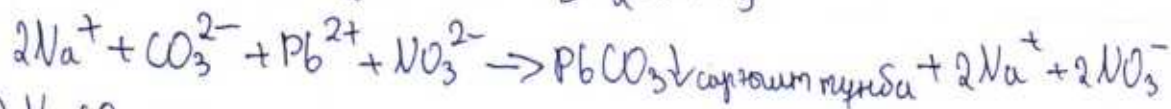
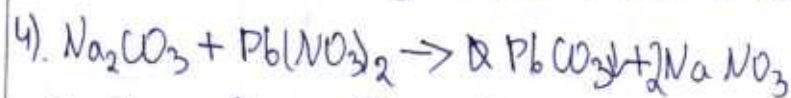
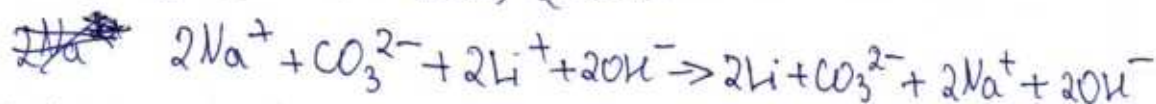
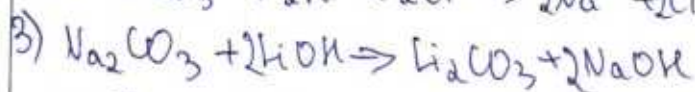
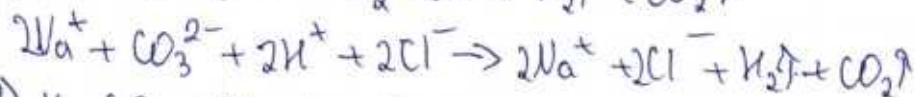
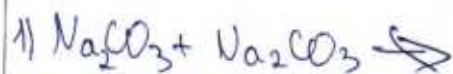
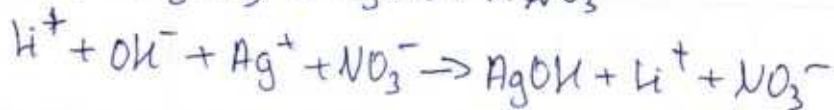
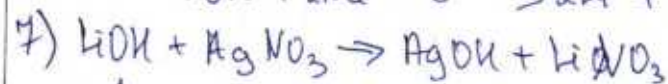
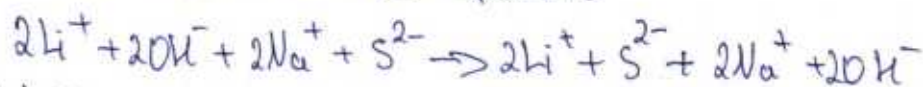
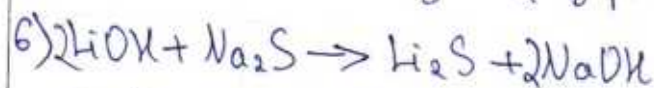
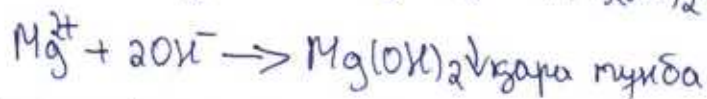
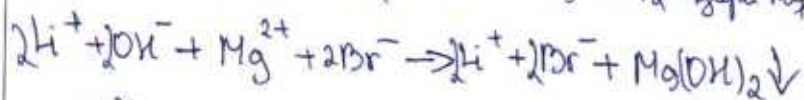
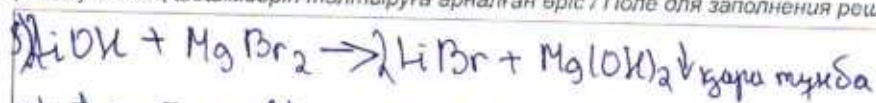
Мәзірінен берілген ерітінділер – тұз қосындысы (NaCl), литий гидроксиді (LiOH), натрий карбонаты (Na_2CO_3), қорғасын нитраты ($\text{Pb}(\text{NO}_3)_2$), магний бромиді (MgBr_2), натрий сульфиді (Na_2S), күміс нитраты (AgNO_3).

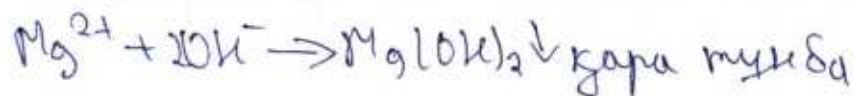
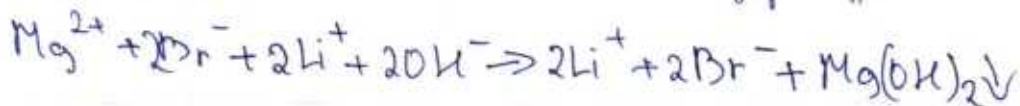
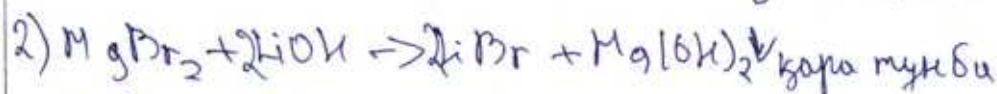
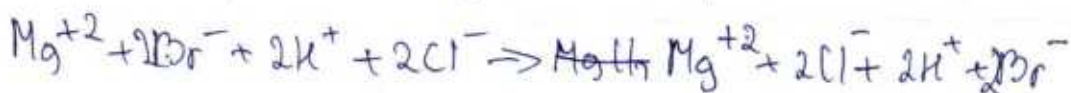
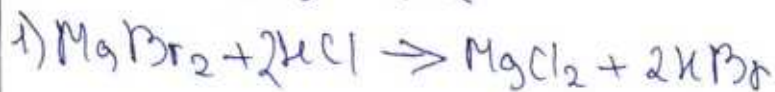
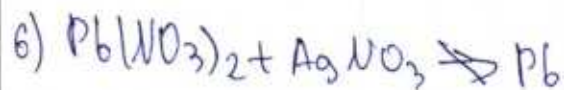
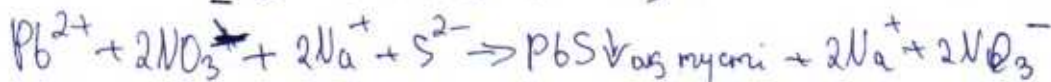
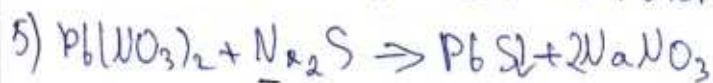
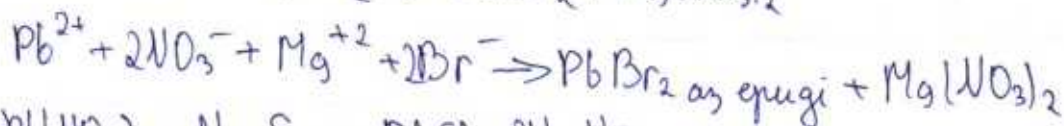
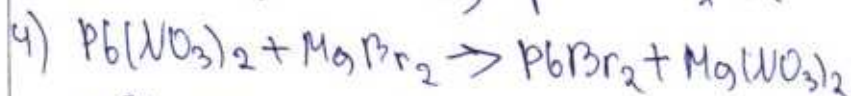
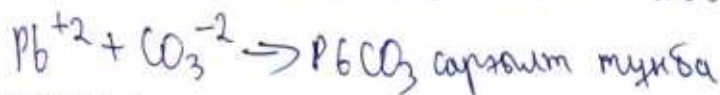
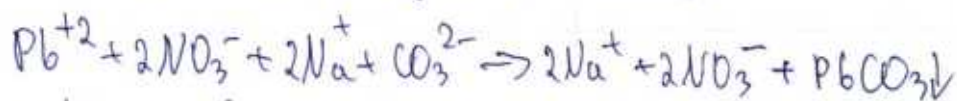
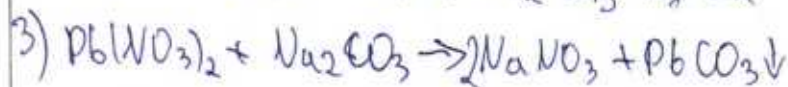
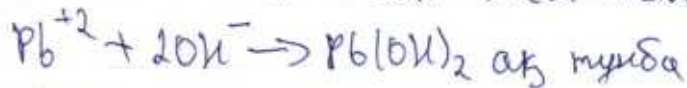
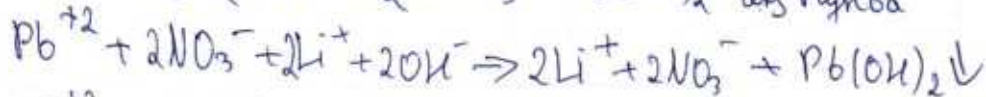
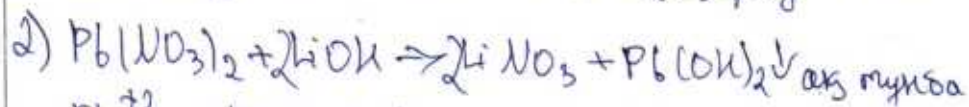
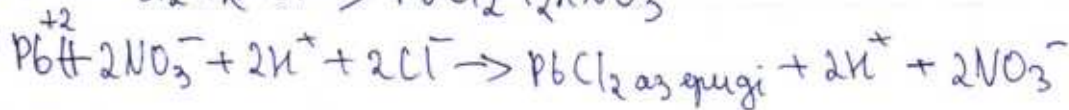
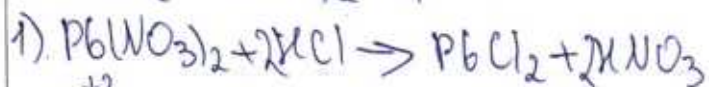
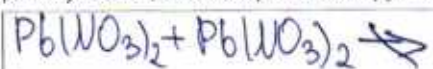


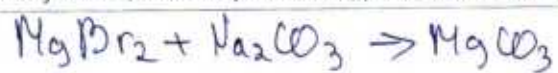
Парақтың артында жауап толтырылған. Қосымша сұрақтарға жауап берілген.













	HCl	LiOH	Na ₂ CO ₃	Zn(NO ₃) ₂	HgBr ₂	Na ₂ S	HgNO ₃
HCl	-	H ₂ O	H ₂ CO ₃ ↑ наз с жаңаға	X	X	X	HgCl ⁻ ↓ белгісіз тұзға асаған
LiOH	H ₂ O	-	X	Zn(OH) ₂ ↓	Hg(OH) ₂ ↓	X	HgOH
Na ₂ CO ₃	H ₂ O	X	-	ZnCO ₃ ↓	HgCO ₃ ↓ наз дег. жаңаға	-	Hg ₂ CO ₃ ↓ наз дег. жаңаға
Zn(NO ₃) ₂	X	Zn(OH) ₂ ↓	ZnCO ₃ ↓	-	X	ZnS ↓ црн асаған	Hg ₂ S ↓ црн асаған
HgBr ₂	X	Hg(OH) ₂ ↓	HgCO ₃ ↓ наз дег. жаңаға	X	-	HgS ↓ црн асаған	X
Na ₂ S	X	X	-	ZnS ↓ црн асаған	HgS ↓ црн асаған	-	Hg ₂ S ↓ црн асаған
HgNO ₃	HgCl ⁻ ↓ белгісіз тұзға асаған	HgOH	Hg ₂ CO ₃ ↓ наз дег. жаңаға	-	X	Hg ₂ S ↓ црн асаған	-

1) • HCl + LiOH → H₂O + LiCl ↑

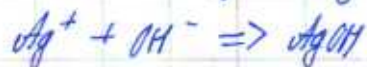
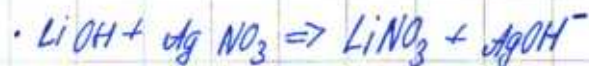
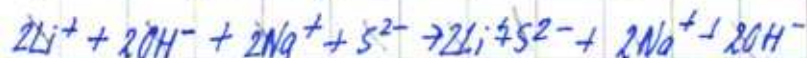
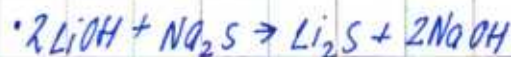
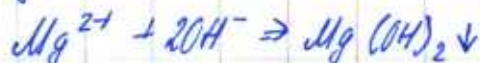
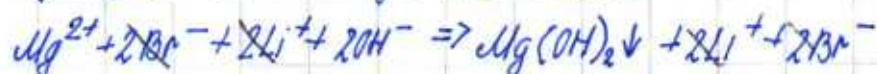
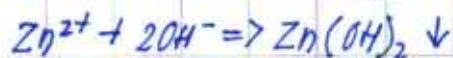
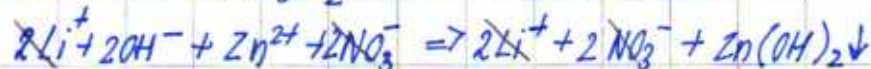
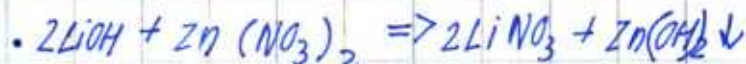
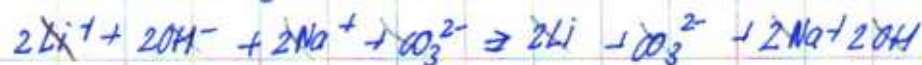
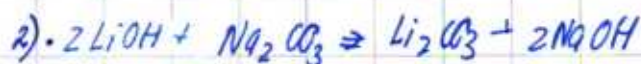
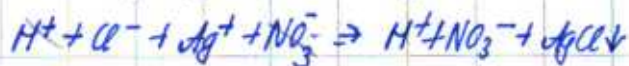
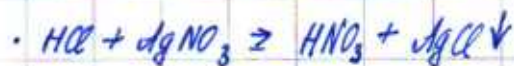
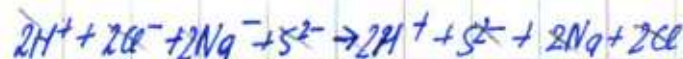
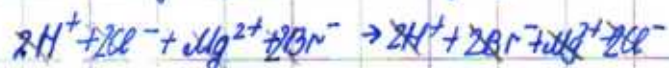
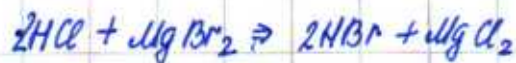
H⁺ + Cl⁻ + Li⁺ + OH⁻ → H₂O + Li⁺ + Cl⁻

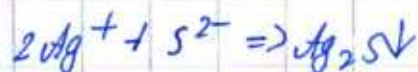
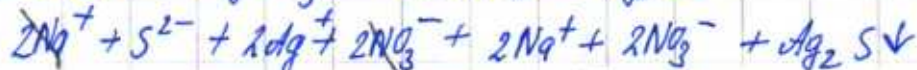
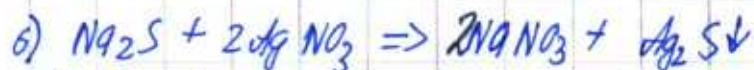
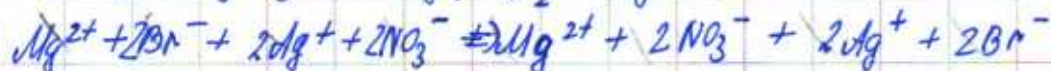
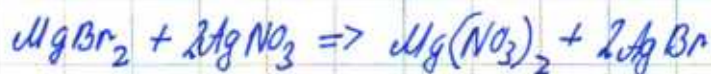
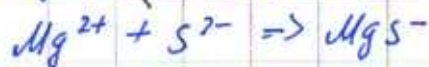
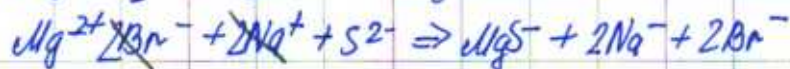
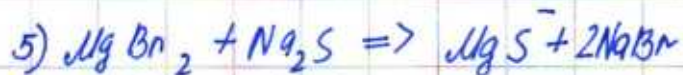
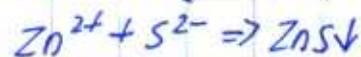
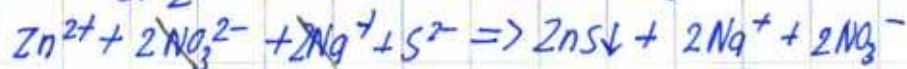
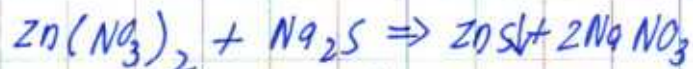
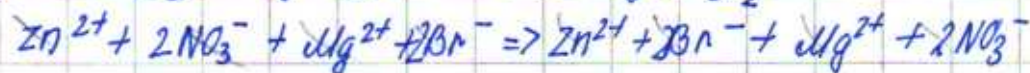
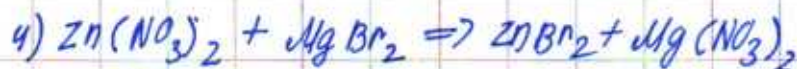
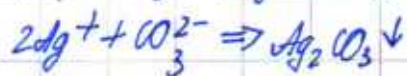
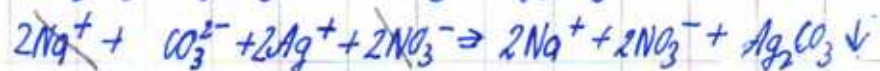
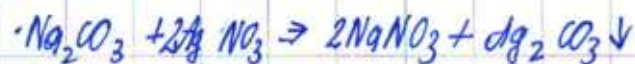
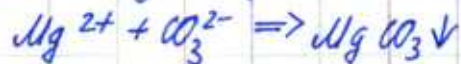
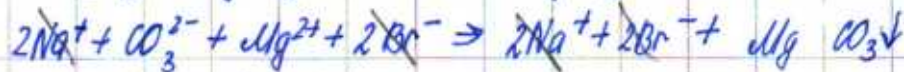
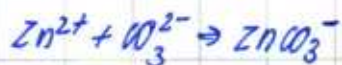
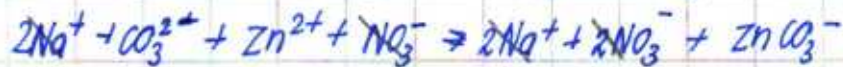
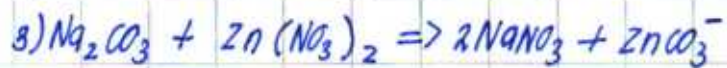
H⁺ + OH⁻ → H₂O

• HCl + Na₂CO₃ → HCO₃ ↑
H₂O + NaCl

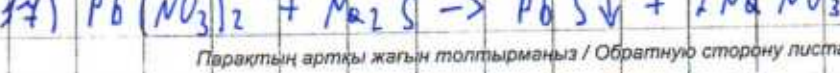
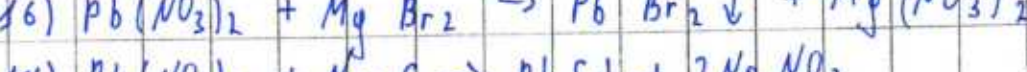
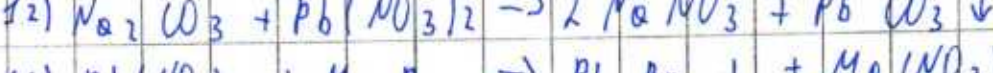
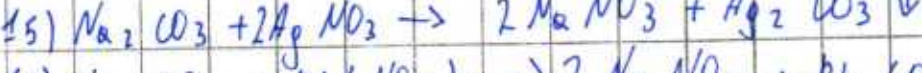
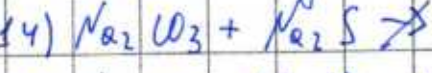
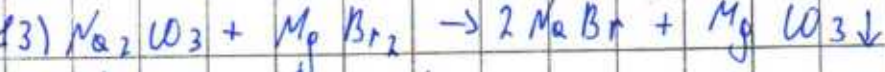
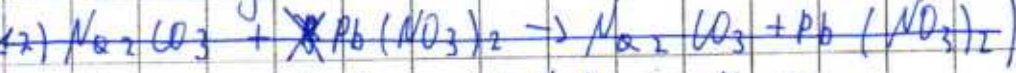
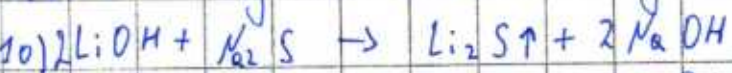
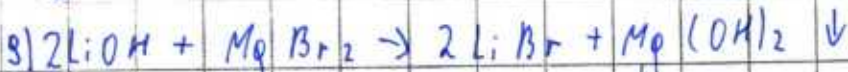
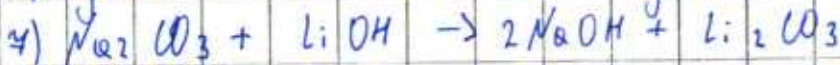
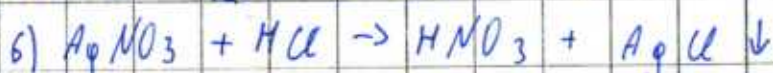
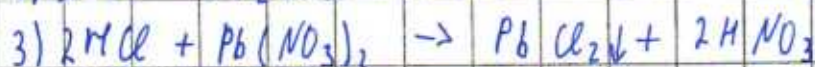
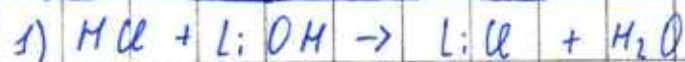
2H⁺ + 2Cl⁻ + 2Na⁺ + CO₃²⁻ → 2H₂O + CO₂ ↑ + 2Na⁺ + 2Cl⁻

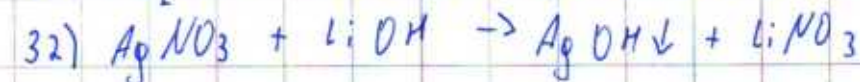
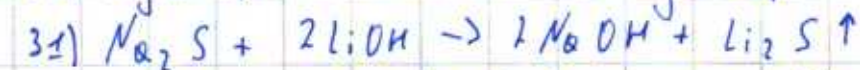
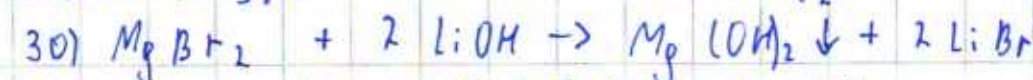
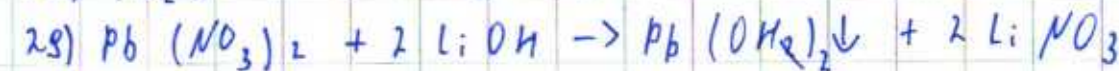
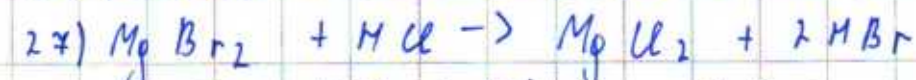
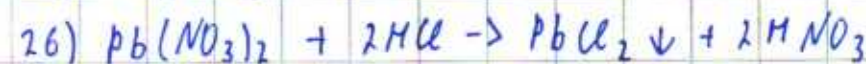
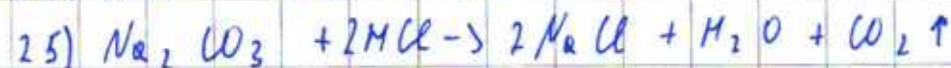
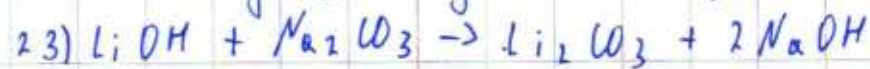
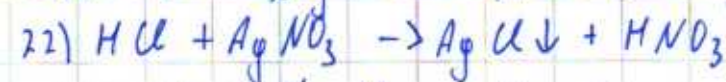
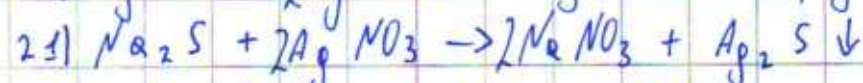
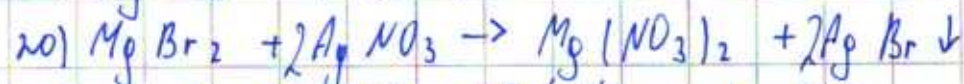
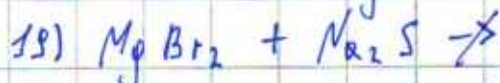
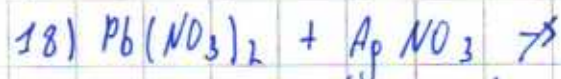
2H⁺ + CO₃²⁻ → H₂O + CO₂ ↑





	$\overset{HCl}{H_2SO_4}$	$LiOH$	Na_2CO_3	$Pb(NO_3)_2$	$MgBr_2$	Na_2S	$AgNO_3$	Барлығы:	
HCl		H_2O	$H_2O \uparrow$	$\downarrow$	—	$\uparrow$	$\downarrow$	$\uparrow \uparrow \downarrow \downarrow$	$H_2O \quad H_2O$
$LiOH$	H_2O		—	$\downarrow$	$\downarrow$	$\uparrow$	$\downarrow$	$\uparrow \downarrow \downarrow \downarrow$	$\downarrow H_2O$
Na_2CO_3	$\uparrow H_2O$	—		$\downarrow$	$\downarrow$	—	$\downarrow$	$\uparrow \downarrow \downarrow \downarrow$	H_2O
$Pb(NO_3)_2$	$\downarrow$	$\downarrow$	$\downarrow$		$\downarrow$	$\downarrow$	—	$\downarrow \downarrow \downarrow \downarrow$	$\downarrow$
$MgBr_2$	—	$\downarrow$	$\downarrow$	$\downarrow$		—	$\downarrow$	$\downarrow \downarrow \downarrow \downarrow$	
Na_2S	$\uparrow$	$\uparrow$	—	$\downarrow$	—		$\downarrow$	$\uparrow \uparrow \downarrow \downarrow$	
$AgNO_3$	$\downarrow$	$\downarrow$	$\downarrow$	—	$\downarrow$	$\downarrow$		$\downarrow \downarrow \downarrow \downarrow$	$\downarrow$





HCl

LiOH

Na₂CO₃Pb(NO₃)₂MgBr₂Na₂SAgNO₃

HCl

CO₂↑
безцветн.
газPbCl₂↓
малораст.
белый осадокAgCl↓
белый
осадок

LiOH

—

—

Pb(OH)₂↓
белый
осадокMg(OH)₂↓
белый
осадок

—

—

Na₂CO₃CO₂↑
безцветн.
газ

—

PbCO₃↓
белый
осадокMgCO₃↓
малораст.
белый осадок

—

Ag₂CO₃↓
желтый
осадокPb(NO₃)₂PbCl₂↓
малораст.
белый осадокPb(OH)₂↓
белый
осадокPbCO₃↓
белый
осадокPbBr₂↓
малораст.
белый осадокPbS↓
черный
осадок

—

MgBr₂

—

Mg(OH)₂↓
белый
осадокMgCO₃↓
малораст.
белый осадокPbBr₂↓
малораст.
белый осадок

—

AgBr↓
желтый
осадокNa₂S

—

—

—

PbS↓
черный
осадок

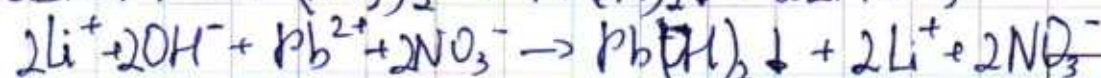
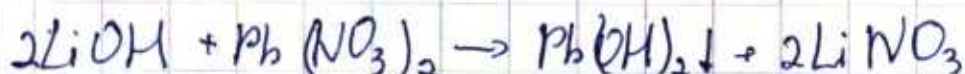
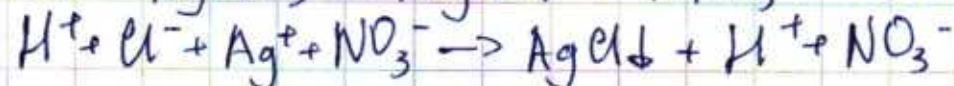
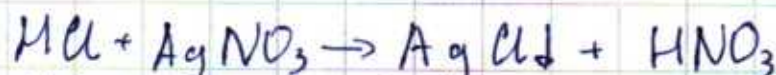
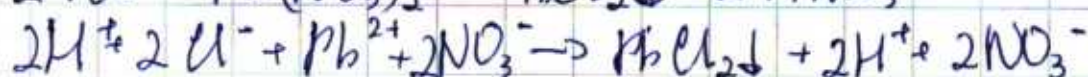
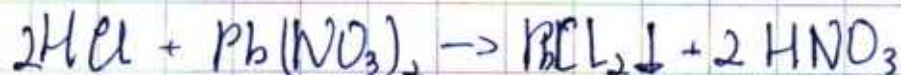
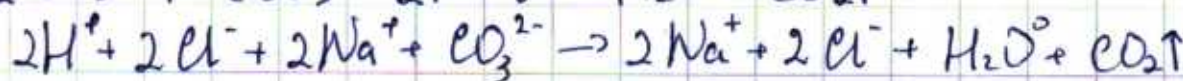
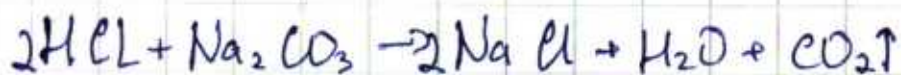
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Ag₂S↓
черный
осадокAgNO₃AgCl↓
белый
осадок

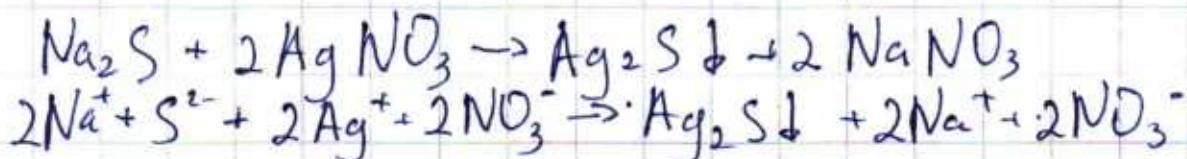
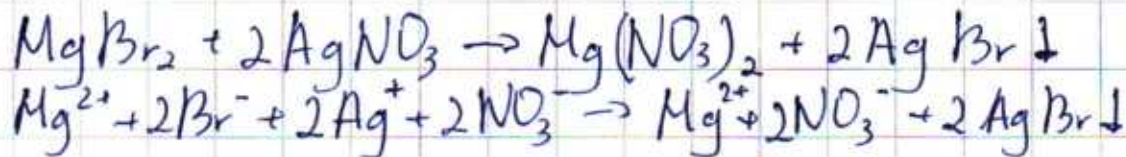
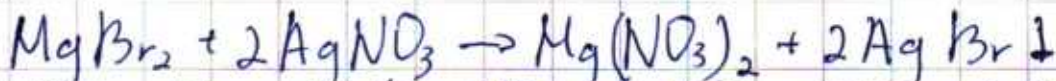
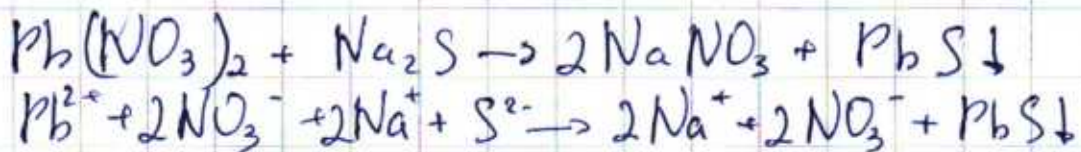
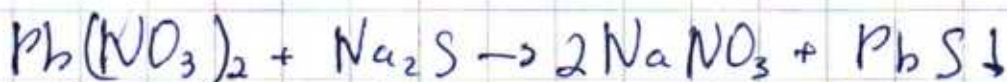
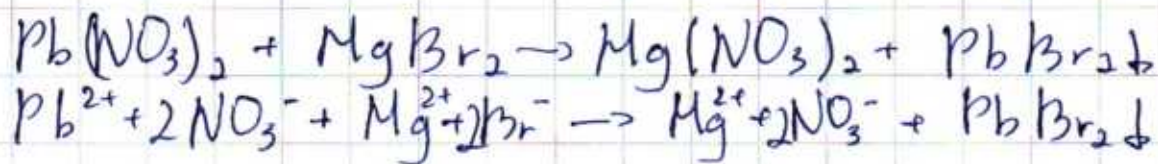
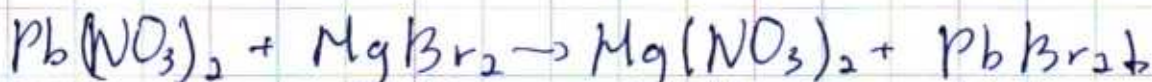
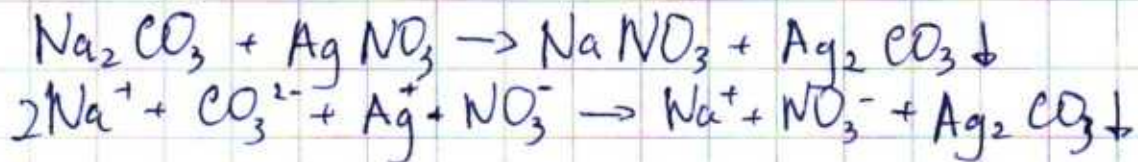
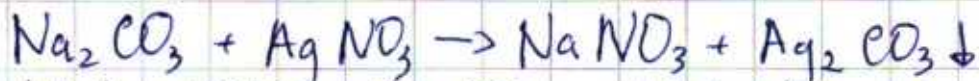
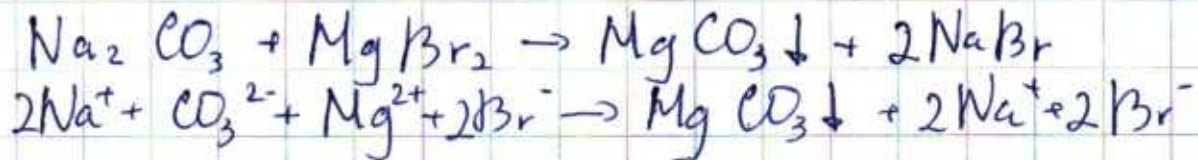
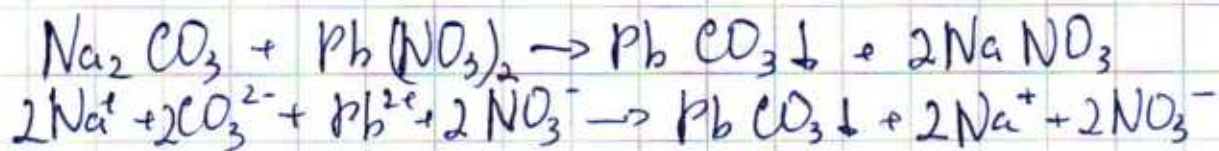
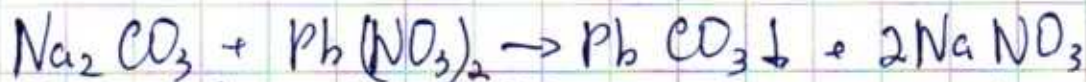
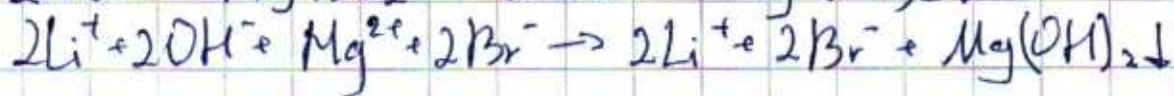
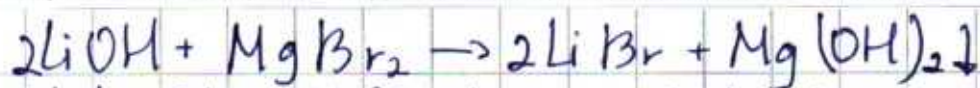
—

Ag₂CO₃↓
желтый
осадок

—

AgBr↓
желтый
осадокAg₂S↓
черный
осадок

Парақтың артқы жағын толтырмаңыз / Обратную сторону листа не выполнять



	HCl	LiOH	NaCO ₃	Pb(NO ₃) ₂	MgBr	K ₂ S	AgNO ₃	Σ
HCl		HCl	NaCl CO ₂ ↑	PbCl ₂ ↓	—	K ₂ Cl		↑ ↓
LiOH	LiCl		(NaOH) ↓			MgOH		↓
NaCO ₃	CO ₂ ↑	(NaOH) ↓		(PbOH) ₂ CO ₃ CO ₂ ↑				↓↓ ↑
Pb(NO ₃) ₂	PbCl ₂ ↓		(PbOH) ₂ CO ₃ CO ₂ ↑					↑ ↓
MgBr	—							
K ₂ S	NaCl	KOH						
AgNO ₃	AgCl							
Σ								

Келізімдер катион түстері бойынша:

Ca - кірпіш қызған; K - күлкіл;

Na - сары масса; Li - мажжурей.

Na - сары.

Cu(OH)₂ - көгілдір тұнба

Ca(OH)₂ - масса

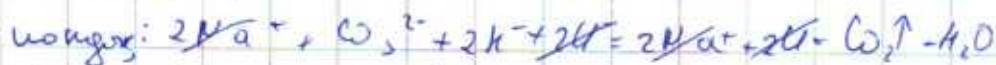
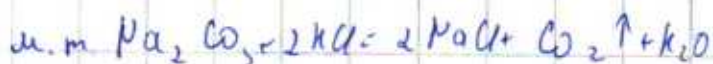
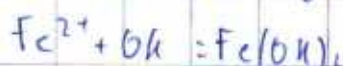
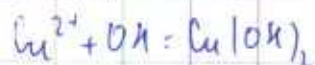
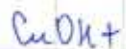
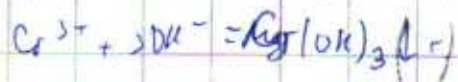
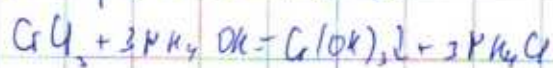
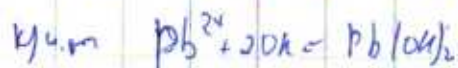
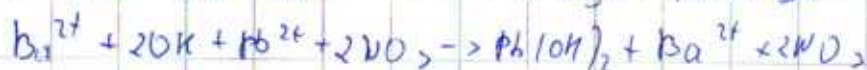
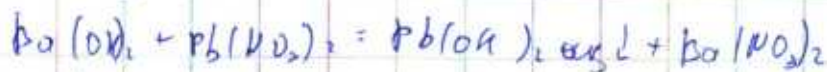
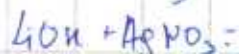
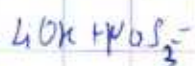
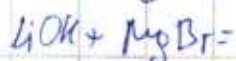
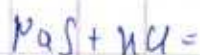
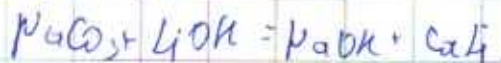
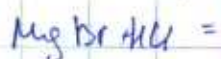
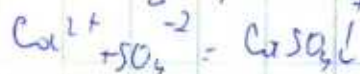
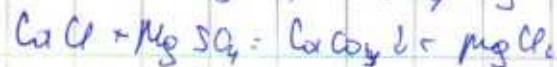
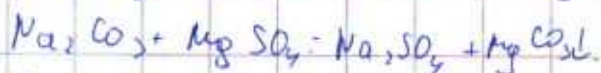
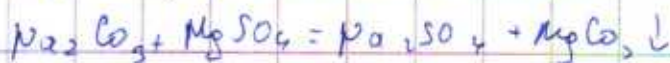
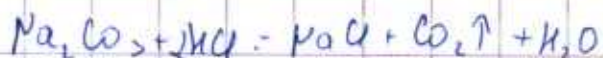
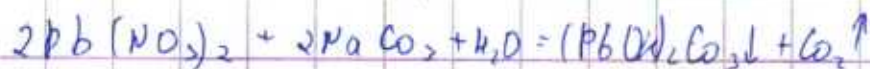
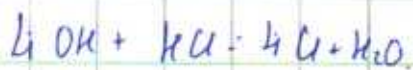
CuS - қара тұнба

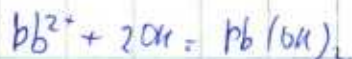
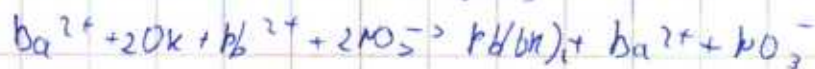
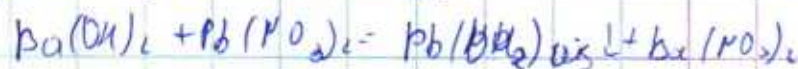
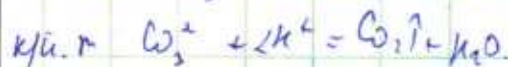
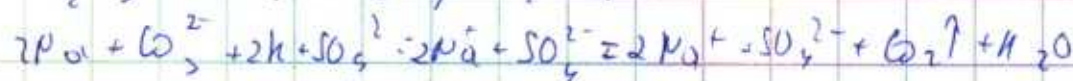
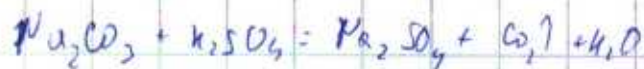
K₂(OH) = қызған

Fe(OH)₃ массадағы тұнба уақытпен қызыр

Fe(OH)₃ қызыр тұнба

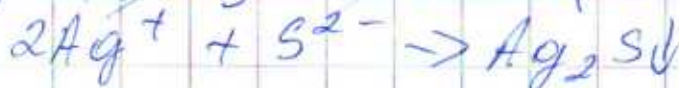
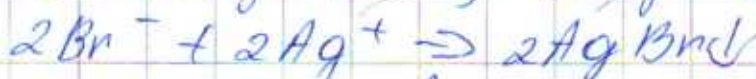
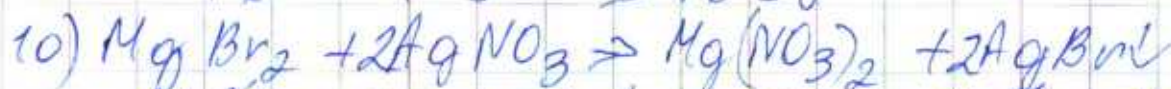
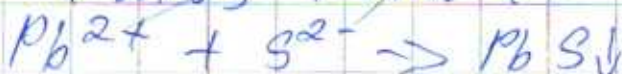
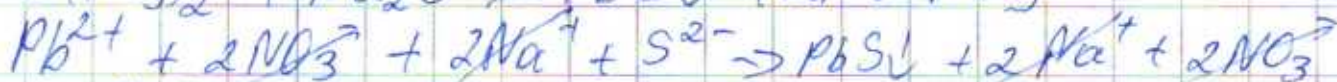
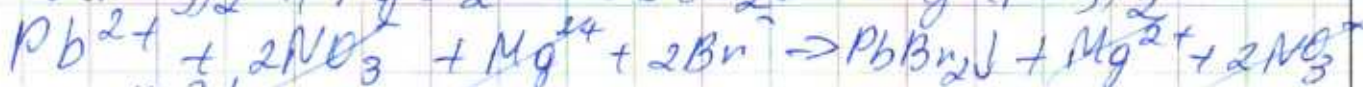
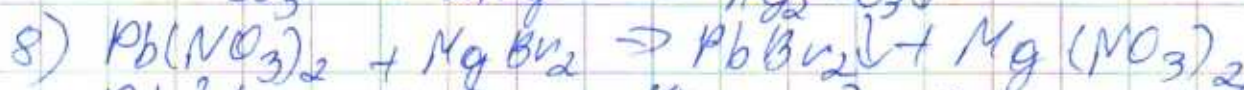
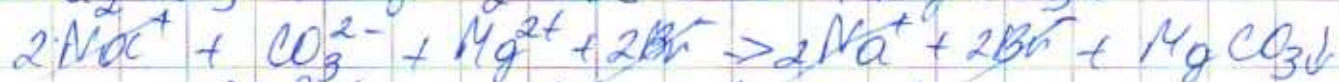
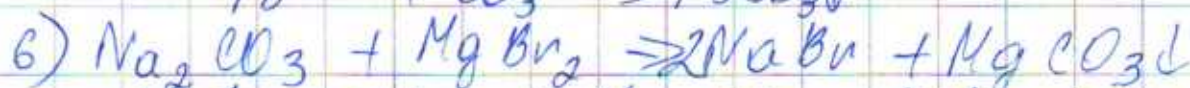
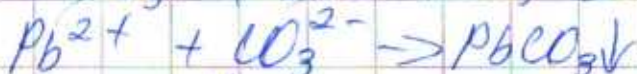
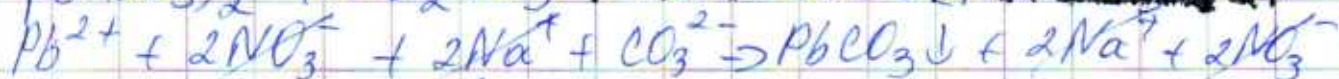
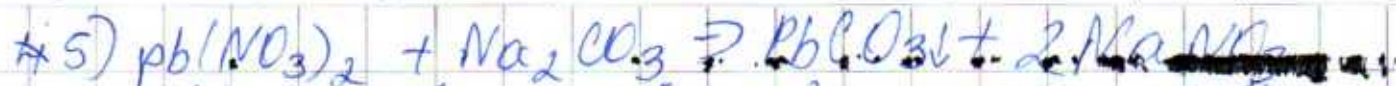
Zn(OH)₂ ақ іріктік тұнба



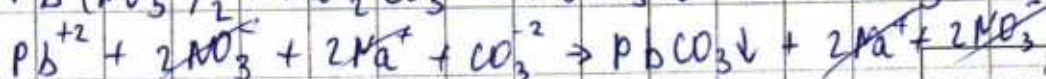
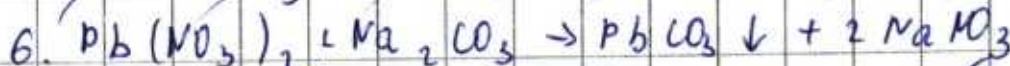
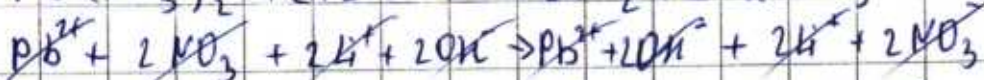
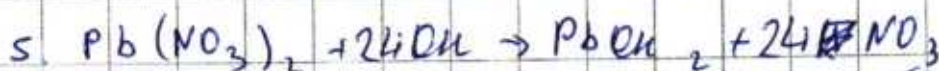
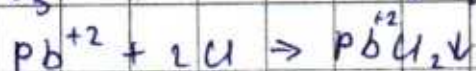
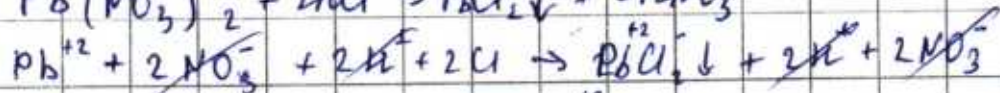
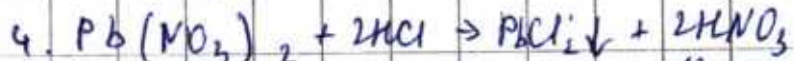
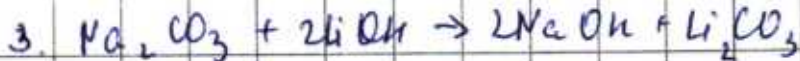
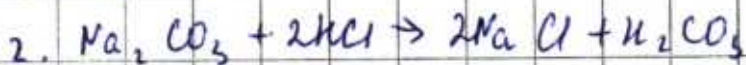
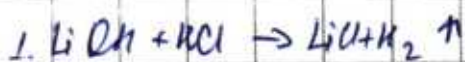


	HCl	LiOH	Na ₂ CO ₃	Pb(NO ₃) ₂	MgBr ₂	Na ₂ S	AgNO ₃	Σ
HCl		—	↑	↓	—	—	—	1↑; 1↓
LiOH	—		—	↓ _{ақ}	↓ _{ақ}	—	—	2↓ _{ақ}
Na ₂ CO ₃	↑	—		↓	↓	—	↓ _{ақ}	1↑; 3↓
Pb(NO ₃) ₂	↓	↓ _{ақ}	↓		↓	↓ _{қара}	—	5↓
MgBr ₂	—	↓ _{ақ}	↓ _{ақ}	↓		—	↓ _{қара}	4↓
Na ₂ S	—	—	—	↓ _{қара}	—		↓ _{қара}	2↓
AgNO ₃	—	—	↓ _{ақ}	↓ _{қара}	↓ _{қара}	↓ _{қара}		3↓
Σ	1↑	2↓	1↑, 3↓	5↓	4↓	2↓	3↓	

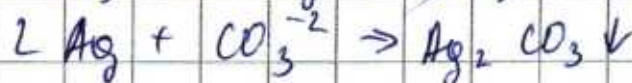
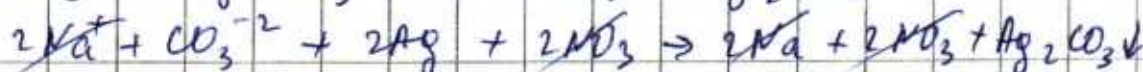
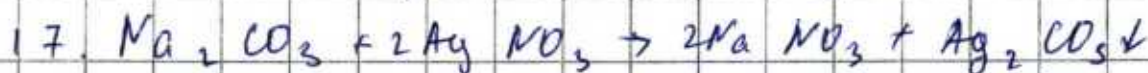
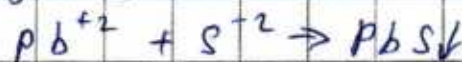
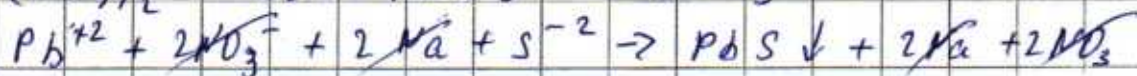
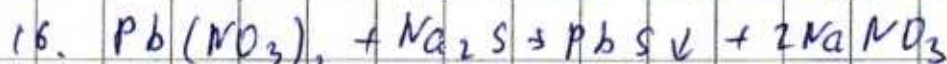
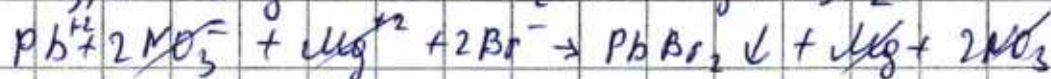
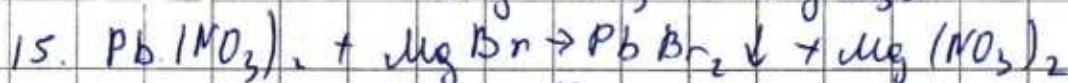
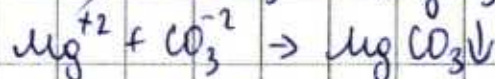
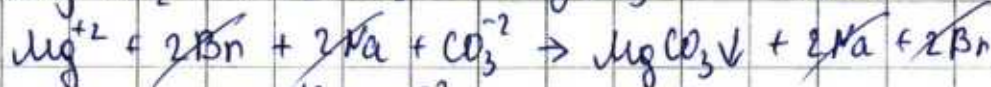
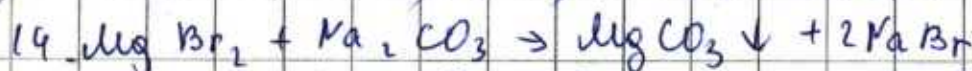
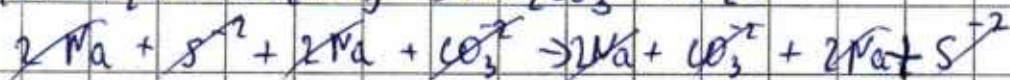
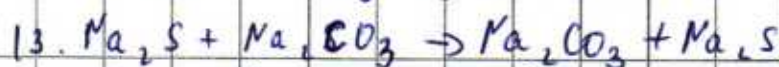
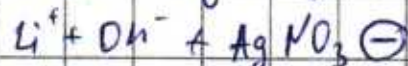
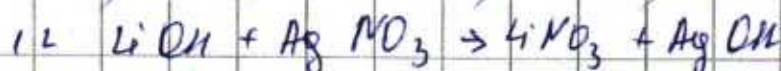
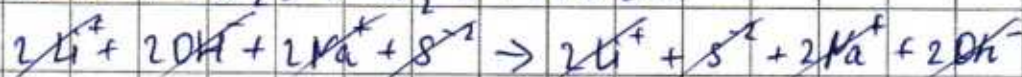
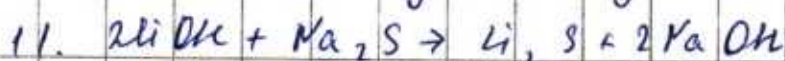
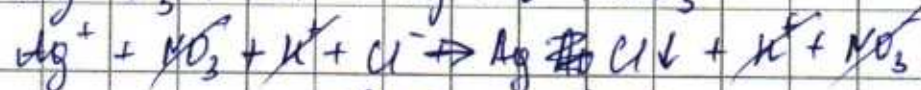
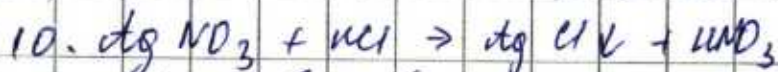
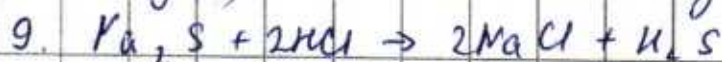
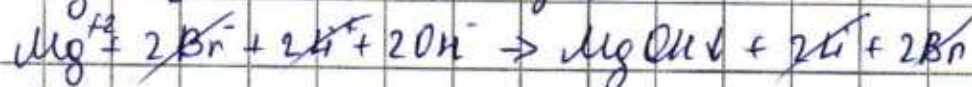
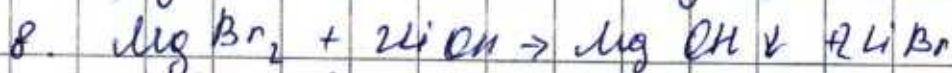
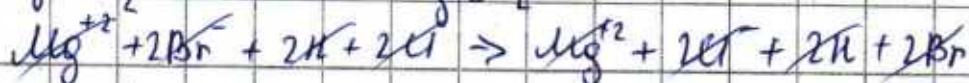
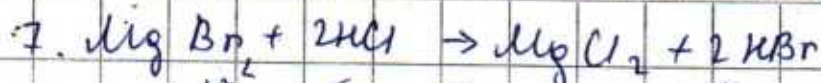
- 1) $2\text{HCl} + \text{Na}_2\text{CO}_3 \rightarrow 2\text{NaCl} + \text{CO}_2\uparrow + \text{H}_2\text{O}$
 $2\text{H}^+ + 2\text{Cl}^- + 2\text{Na}^+ + \text{CO}_3^{2-} \rightarrow 2\text{Na}^+ + 2\text{Cl}^- + \text{CO}_2\uparrow + \text{H}_2\text{O}$
 $2\text{H}^+ + \text{CO}_3^{2-} \rightarrow \text{CO}_2 + \text{H}_2\text{O}$
- 2) $2\text{HCl} + \text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{HNO}_3 + \text{PbCl}_2\downarrow$
 $2\text{H}^+ + 2\text{Cl}^- + \text{Pb}^{2+} + 2\text{NO}_3^- \rightarrow 2\text{H}^+ + 2\text{NO}_3^- + \text{PbCl}_2\downarrow$
 $2\text{Cl}^- + \text{Pb}^{2+} \rightarrow \text{PbCl}_2\downarrow$
- 3) $2\text{LiOH} + \text{Pb}(\text{NO}_3)_2 \rightarrow 2\text{LiNO}_3 + \text{Pb}(\text{OH})_2\downarrow$
 $2\text{Li}^+ + 2\text{OH}^- + \text{Pb}^{2+} + 2\text{NO}_3^- \rightarrow 2\text{Li}^+ + 2\text{NO}_3^- + \text{Pb}(\text{OH})_2\downarrow$
 $2\text{OH}^- + \text{Pb}^{2+} \rightarrow \text{Pb}(\text{OH})_2$
- 4) $2\text{LiOH} + \text{MgBr}_2 \rightarrow 2\text{LiBr} + \text{Mg}(\text{OH})_2\downarrow$
 $2\text{Li}^+ + 2\text{OH}^- + \text{Mg}^{2+} + 2\text{Br}^- \rightarrow 2\text{Li}^+ + 2\text{Br}^- + \text{Mg}(\text{OH})_2\downarrow$
 $2\text{OH}^- + \text{Mg}^{2+} \rightarrow \text{Mg}(\text{OH})_2\downarrow$

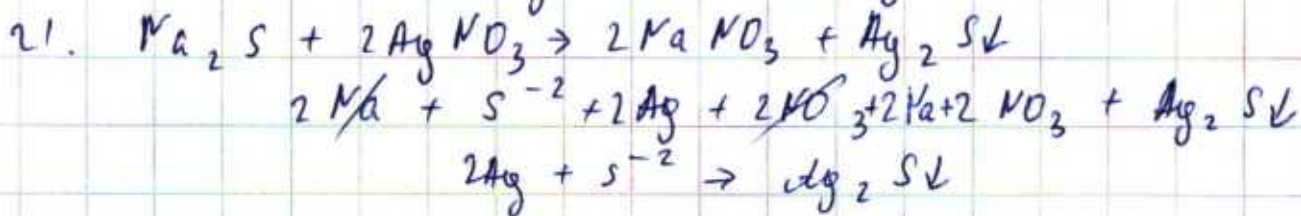
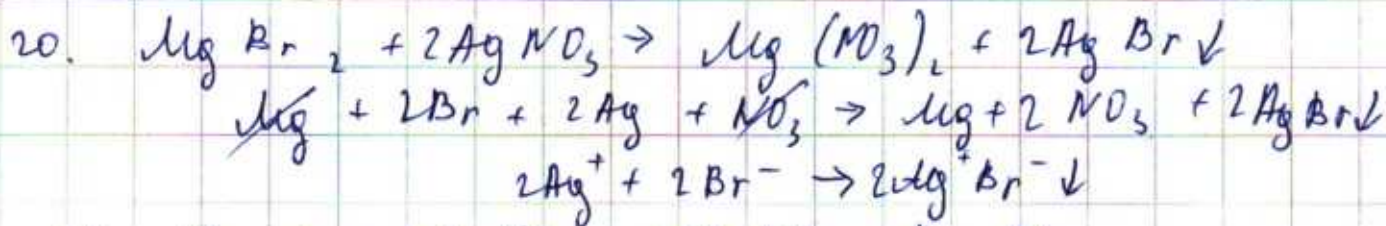
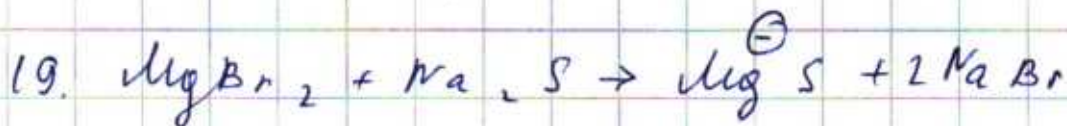
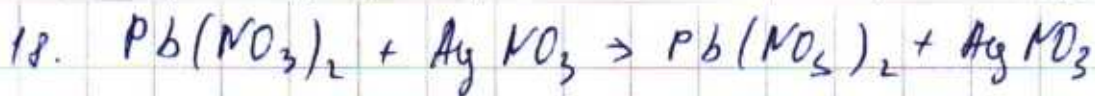


	KCl	LiOH	Na ₂ CO ₃	Pb(NO ₃) ₂	MgBr ₂	K ₂ S	AgNO ₃	қорығын дес.
KCl	///	↑	—	↓	—	—	↓	↑, ↓↓
LiOH	↑	///	—	—	↓	—	///	↑, ↓
Na ₂ CO ₃	—	—	///	↓	↓	—	↓	↓↓↓
Pb(NO ₃) ₂	↓	—	↓	///	↓	↓	—	↓↓↓
MgBr ₂	—	↓	—	↓	///	///	↓	↓↓↓
K ₂ S	—	—	—	↓	///	///	↓	↓↓
AgNO ₃	↓	///	↓	—	///	↓	///	↓↓↓



Парақтың артқы жағын толтырмаңыз / Обратную сторону листа не заполнять





Валл және қостары 4 неорганикалық основаның
кислот и солей: Сандан кислоталық гидроксид ионы,
карбонат ионы, нитрат ионы, бромид ионы,
сульфид ионы и нитрат серебра. Неполнота

Ағушық обжонекке образований диагональ - цукта растко-
нине образований рафрмного комплексо -
растворимости и выделение газа - 1, составные твердые
материалы и нитраты.

Затимите уравнения реакции каждого вещества

1) $S + O_3 = SO_2$ - выделяется кислород
красный осадок
растворяется в воде

2) $Li + H_2O = LiOH + H_2$ - выделяется литиевый водородный газ
зеленый осадок
растворяется в воде

4) $Sn + HNO_3 = Sn(NO_3)_2$ - выделяется азотистый газ
коричневый осадок
не растворяется в воде

3) $\text{Na} + \text{O}_3 = \text{Na-O}_3$ - выделяется углеродный
белый осадок.
растворим в воде

5) $\text{MgH} + \text{Br} = \text{MgHBr}$ - не летуче водородный
коричневый осадок
не растворим

6) $\text{NaCl} + \text{H}_2\text{O} = \text{NaOH}_2$ - летучие водородный
белый осадок
растворим в воде

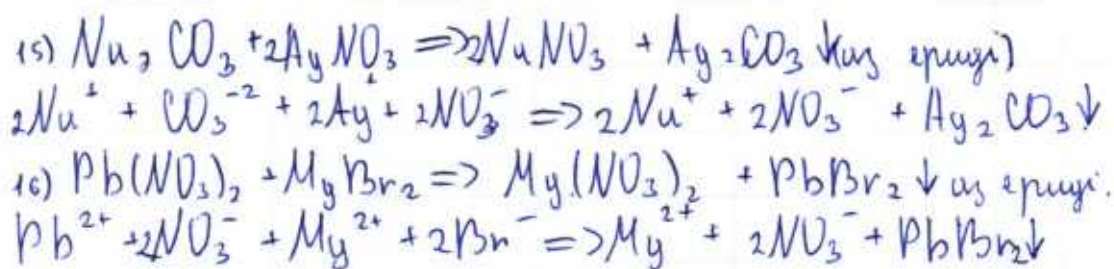
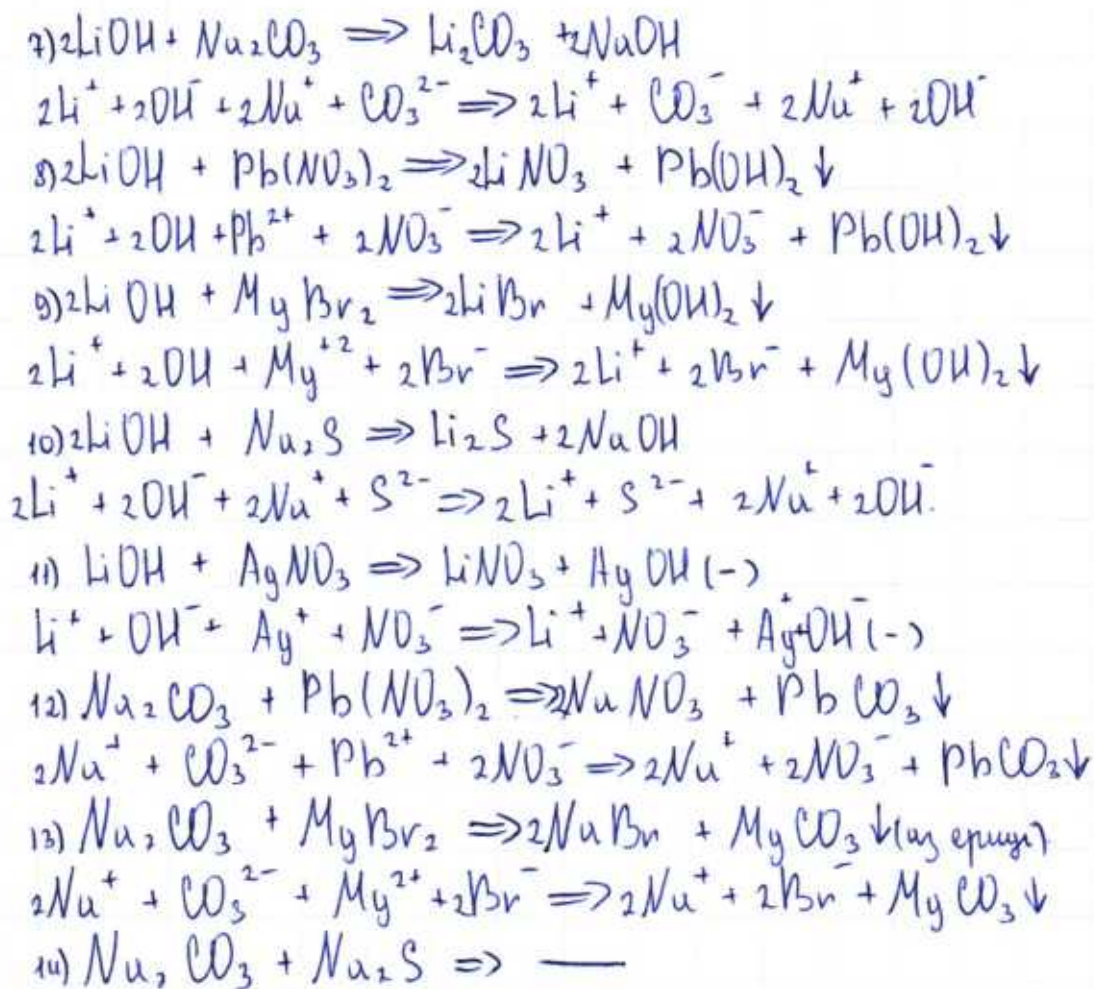
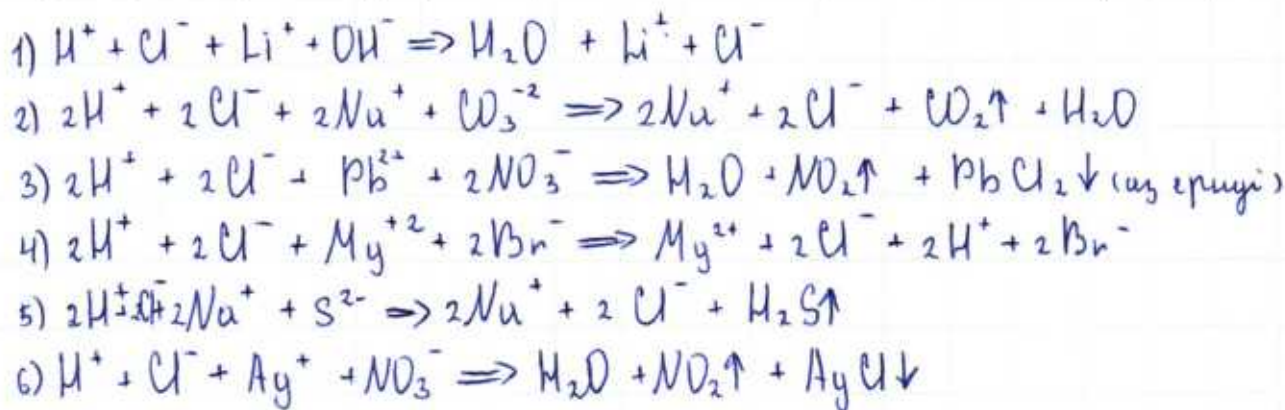
7) $\text{Ag} + \text{NO}_3 = \text{AgNO}_3$ - выделяется азотистый
осадок
серебристый осадок
не растворим.

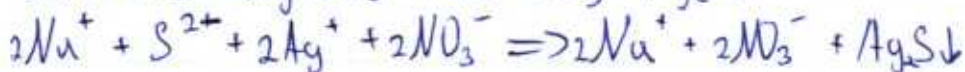
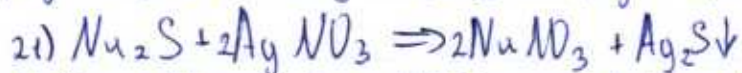
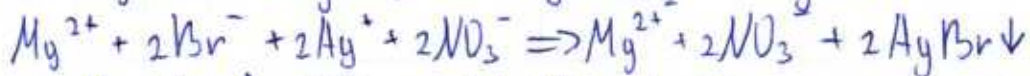
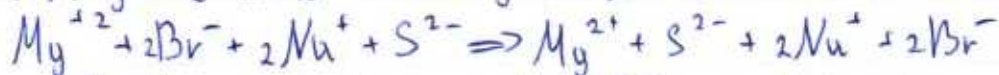
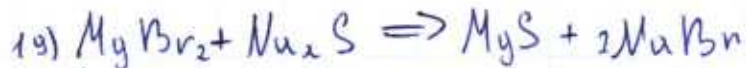
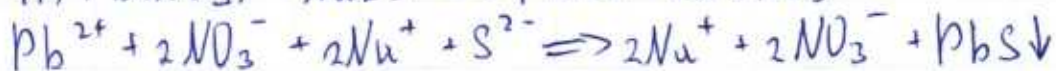
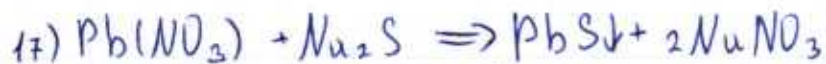
	HCl	LiOH	Na ₂ CO ₃	Pb(NO ₃) ₂	MgBr ₂	Na ₂ S	AgNO ₃
HCl		—	↑	↓ еригі	—	↑	↓ т.с.
LiOH	—		—	↓	↓	—	суда едірмейді немесе бөлінеді
Na ₂ CO ₃	↑	—		↓	↓ аз еригі		↓ т.с.
Pb(NO ₃) ₂	↓ еригі	↓	↓		↓ т.с.	↓ к.р.	
MgBr ₂	—	↓	↓ аз еригі	↓ т.с.		суда едірмейді немесе бөлінеді	↓
Na ₂ S	↑	—		↓ к.р.	суда едірмейді немесе бөлінеді		↓
AgNO ₃	↓ т.с.	суда едірмейді немесе бөлінеді	↓ аз еригі		↓	↓	

Реакциялар.

- $\text{HCl} + \text{LiOH} \Rightarrow \text{H}_2\text{O} + \text{LiCl}$ (бейтараптану)
- $2\text{HCl} + \text{Na}_2\text{CO}_3 \Rightarrow 2\text{NaCl} + \text{CO}_2\uparrow + \text{H}_2\text{O}$ (т.с., т.с.)
- $2\text{HCl} + \text{Pb}(\text{NO}_3)_2 \Rightarrow \text{H}_2\text{O} + \text{NO}_2\uparrow + \text{PbCl}_2$ (аз еригі)
- $2\text{HCl} + \text{MgBr}_2 \Rightarrow \text{MgCl}_2 + 2\text{HBr}$
- $2\text{HCl} + \text{Na}_2\text{S} \Rightarrow 2\text{NaCl} + \text{H}_2\text{S}\uparrow$ (т.с.)
- $\text{HCl} + \text{AgNO}_3 \Rightarrow \text{H}_2\text{O} + \text{NO}_2\uparrow + \text{AgCl}\downarrow$ (т.с.)

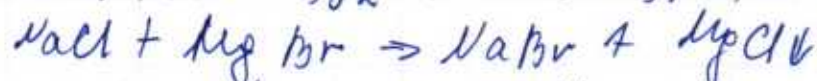
нәтиже →



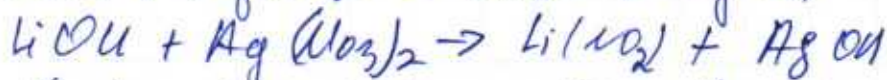


№	NaCl	LiOH	Na ₂ CO ₃	Pb(NO ₃) ₂	MgBr ₂	Na ₂ S	Ag(NO ₃)	нәтиже
NaCl	-	-	-	PbCl	MgCl	-	Na(NO ₃)	↓ 3
LiOH	-	-	NaOH	Pb(NO ₃)	LiBr	LiS	Li(NO ₃)	↓ 5
Na ₂ CO ₃	-	NaOH	-	Na(NO ₃)	NaBr	-	-	↓ 3
Pb(NO ₃) ₂	PbCl	LiOH	NaNO ₃	-	PbBr	Na(NO ₃)	-	↓ 5
MgBr ₂	MgCl	LiBr	NaBr	PbBr	-	NaBr	Mg(NO ₃)	↓ 6
Na ₂ S	-	LiS	-	Na(NO ₃)	NaBr	-	Na(NO ₃)	↓ 4
Ag(NO ₃)	Na(NO ₃)	Li(NO ₃)	Na(NO ₃)	-	Na(NO ₃)	Na(NO ₃)	-	↓ 4

NaCl оқи оқимен әрекеттеспейді; LiOH, Na₂CO₃, Na₂S неге әрекеттеспейді.



LiOH де NaCl, оқимен, әрекеттеспейді.



Na₂CO₃ де NaCl, Na₂CO₃, Na₂S, Ag(NO₃) неге әрекеттеспейді.

