



4. ....  $\text{Pb}(\text{NO}_3)_2 + \text{NO} + \text{H}_2\text{O}$
5. ....  $\text{S} + \text{K}_2\text{SO}_4 + \text{MnSO}_4 + \text{H}_2\text{O}$
6. ....  $\text{NaCl} + \text{I}_2 + \text{KOH}$
7. ....  $\text{KClO}_3 + \text{KCl} + \text{H}_2\text{O}$
8. ....  $\text{MnSO}_4 + \text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
9. ....  $\text{SO}_2 + \text{CuSO}_4 + \text{H}_2\text{O}$
10. ....  $\text{NH}_4\text{NO}_3 + \text{Mg}(\text{NO}_3)_2 + \text{H}_2\text{O}$

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1.	$2\text{KI} + 2\text{NaNO}_2 + 2\text{H}_2\text{SO}_4 = \text{I}_2 + \text{K}_2\text{SO}_4 + \text{Na}_2\text{SO}_4 + 2\text{NO} + 2\text{H}_2\text{O}$		2
2.	$5\text{KI} + \text{KIO}_3 + 3\text{H}_2\text{SO}_4 = 3\text{I}_2 + 3\text{K}_2\text{SO}_4 + 3\text{H}_2\text{O}$		2
3.	$6\text{KBr} + \text{K}_2\text{Cr}_2\text{O}_7 + 7\text{H}_2\text{SO}_4 = 3\text{Br}_2 + \text{Cr}_2(\text{SO}_4)_3 + 4\text{K}_2\text{SO}_4 + 7\text{H}_2\text{O}$		2
4.	$3\text{Pb} + 8\text{HNO}_3 = 3\text{Pb}(\text{NO}_3)_2 + 2\text{NO} + 4\text{H}_2\text{O}$		2
5.	$2\text{KMnO}_4 + 3\text{H}_2\text{SO}_4 + 5\text{H}_2\text{S} = 5\text{S} + \text{K}_2\text{SO}_4 + 2\text{MnSO}_4 + 8\text{H}_2\text{O}$		2
6.	$\text{NaClO} + 2\text{KI} + \text{H}_2\text{O} = \text{NaCl} + \text{I}_2 + 2\text{KOH}$		2
7.	$6\text{KOH} + 3\text{Cl}_2 = \text{KClO}_3 + 5\text{KCl} + 3\text{H}_2\text{O}$		2
8.	$2\text{KMnO}_4 + 5\text{Na}_2\text{SO}_3 + 3\text{H}_2\text{SO}_4 = 2\text{MnSO}_4 + 5\text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4 + 3\text{H}_2\text{O}$		2
9.	$\text{Cu} + 2\text{H}_2\text{SO}_4(\text{aq}) = \text{SO}_2 + \text{CuSO}_4 + 2\text{H}_2\text{O}$		2
10.	$4\text{Mg} + 10\text{HNO}_3 = \text{NH}_4\text{NO}_3 + 4\text{Mg}(\text{NO}_3)_2 + 3\text{H}_2\text{O}$		2
			20

3.

- , 3,6 (V), 5,4 , 5,0
- 16,2
1. ?
  2. ?
- : 5 12 , 3 .
- :

(	,	)	
1.			1
2.	$n(\text{H}_2\text{O}) = 5,4/18 = 0,3$		1
3.	$n(\text{H}) = 2n(\text{H}_2\text{O}) = 0,6$		1
4.	$\text{Ca}(\text{OH})_2 + \text{CO}_2 = \text{CaCO}_3$		2
5.	$\text{Ca}(\text{OH})_2 + 2\text{CO}_2 = \text{Ca}(\text{HCO}_3)_2$		2
6.	$n(\text{CaCO}_3) = 5,0/100 = 0,05$	$\text{CaCO}_3$	1
7.	$n(\text{CO}_2) = n(\text{CaCO}_3) = 0,05$	$\text{CaCO}_3$	1
8.	$n(\text{Ca}(\text{HCO}_3)_2) = 16,2/162 = 0,1$	$\text{Ca}(\text{HCO}_3)_2$	1
9.		$\text{Ca}(\text{HCO}_3)_2$	1

$n(\text{CO}_2) = 2n(\text{Ca}(\text{HCO}_3)_2) = 0,2$	
10. $0,05 + 0,2 = 0,25$	<b>2</b>
11. $n(\text{C}) = n(\text{CO}_2) = 0,25$	<b>1</b>
12. $0,6 \cdot 1 + 0,25 \cdot 12 = 3,6$ -	<b>2</b>
13. $x\text{H}_y$ $X : Y = 0,25:0,6$ $X : Y = 1: 2,4$ $\text{C}_5\text{H}_{12}$	<b>2</b>
14. -	<b>1</b>
15. - 3	<b>1</b>
	<b>20</b>

4.

48,5

II

404

NaOH 9% ( =1,10 / ).

1.

2.

( , )	
1. $\text{MeS} + 1,5 \text{O}_2 = \text{MeO} + \text{SO}_2$ $\text{SO}_2 + 0,5 \text{O}_2 = \text{SO}_3$ $\text{SO}_3 + \text{H}_2\text{O} = \text{H}_2\text{SO}_4$ $\text{H}_2\text{SO}_4 + 2\text{NaOH} = \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$	<b>4</b>
2. 2 , NaOH. 1	<b>4</b>
3. $m(\text{NaOH}) = V \cdot \cdot = 404 \cdot 1,10 \cdot 0,09 = 40$ $n(\text{NaOH}) = m(\text{NaOH})/M(\text{NaOH}) = 40/40 = 1$ NaOH:	<b>2</b>
4. 0,5	<b>2</b>
5. : $M(\text{MeS}) = 48,5/0,5 = 97$ /	<b>3</b>
6. : $M(\text{MeS}) = \text{Ar}(\text{Me}) + \text{Ar}(\text{S})$ $\text{Ar}(\text{Me}) = 97-32 = 65$ /	<b>3</b>
1. -	<b>2</b>
	<b>20</b>

5.

( , )	
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<b>1.</b>	KI.	<b>5</b>
<b>2.</b>	$4\text{HNO}_3(\text{aq}) + 2\text{KI}(\text{aq}) = \text{I}_2 + 2\text{NO}_2 + 2\text{KNO}_3 + 2\text{H}_2\text{O}$ - $\text{N}^{+5} + 1\text{e} \quad \text{N}^{+4} \quad 2$ $2\text{I}^{-1} - 2\text{e} \quad \text{I}_2^0 \quad 1$ $\text{N}^{+5} -$ $\text{I}^{-1} -$	<b>2</b> <b>1</b> <b>1</b> <b>1</b>
<b>3.</b>	$9\text{H}_2\text{SO}_4(\text{aq}) + 8\text{KI}(\text{aq}) = \text{H}_2\text{S} + 4\text{I}_2 + 8\text{KHSO}_4 + 4\text{H}_2\text{O}$ $5\text{H}_2\text{SO}_4(\text{aq}) + 8\text{KI}(\text{aq}) = \text{H}_2\text{S} + 4\text{I}_2 + 4\text{K}_2\text{SO}_4 + 4\text{H}_2\text{O}$ -	<b>2</b> <b>1</b> <b>1</b> <b>1</b>
<b>4.</b>	$\text{H}_3\text{PO}_4(\text{aq}) + \text{KI}(\text{aq}) = \text{KH}_2\text{PO}_4 + \text{HI}$	<b>2</b> <b>1</b>
<b>5.</b>		<b>2</b>
		<b>20</b>