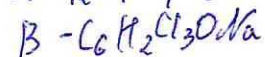
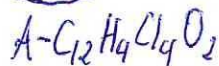


№1.2



$m_{\text{исход}} = 300 \text{ г}$

$\omega(A) = 84\%$

$\omega(B) = 16\%$

$m(A) = 300 \cdot 0,84 = 252 \text{ г}$

$m(B) = 300 \cdot 0,16 = 48 \text{ г}$

$M(A) = 144 + 4 + 142 + 32 = 322 \text{ г/моль}$

$M(B) = 72 + 2 + 106,5 + 16 + 23 = 219,5 \text{ г/моль}$

$\omega(C)_A = \frac{144}{322} \cdot 100\% = 44,72\%$

$\omega(C)_B = \frac{72}{219,5} \cdot 100\% = 32,8\%$

$m(C)_A = 252 \cdot 0,4472 = 112,7 \text{ г}$

$m(C)_B = 48 \cdot 0,328 = 15,74 \text{ г}$

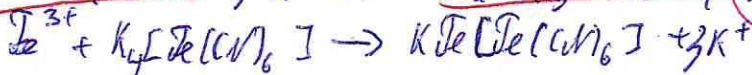
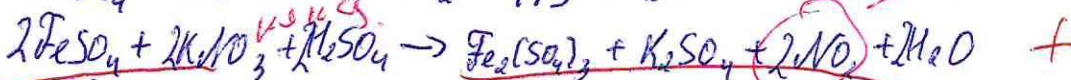
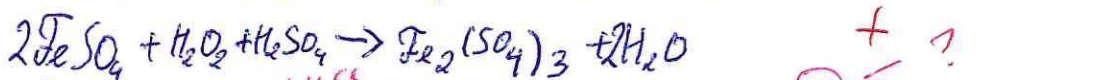
$m(C)_{\text{исход}} = 112,7 + 15,74 = 128,44 \text{ г}$

$\omega(C)_{\text{исход}} = \frac{128,44}{300} \cdot 100\% = 42,81\%$ Order: 42,81%

| | | | | | | | | | |
|---|---|----|----|----|---|----|----|---|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 4 | 6 | 10 | 10 | 10 | 6 | 12 | 10 | 8 | 2 |

68

№2.2

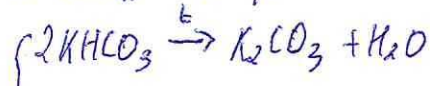


⊖



№3.2

$$m(\text{смесь}) = 250 \text{ г}$$



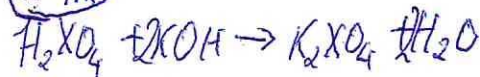
так как $m(\text{KHCO}_3) = m(\text{CaCO}_3) = 100$, значит минимально возможно CaO

$$n = \frac{250}{100} = 2,5 \text{ моль}$$

$$m(\text{CaO}) = 2,5 \cdot 56 = 140 \text{ грамм}$$

Ответ: 140 грамм

№4.2



$$m(\text{H}_2\text{XO}_4) = 32,4 \text{ г}$$

$$m(\text{K}_2\text{XO}_4) = 47,6 \text{ г}$$

$$n(\text{K}_2\text{XO}_4) = n(\text{H}_2\text{XO}_4), \text{ значит}$$

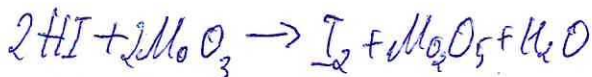
$$\frac{32,4}{66+x} = \frac{47,6}{192+x}$$

$$4600,8 + 324x = 31466 + 476x$$

$$x = 96$$

x - Mo, формула к-та H_2MoO_4

$$m(\text{MoO}_3) = 28,8 \text{ г}$$



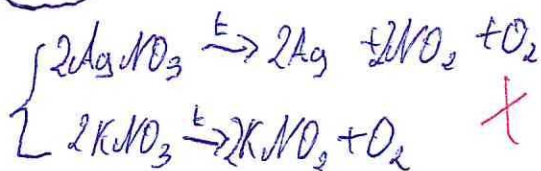
$$n(\text{MoO}_3) = \frac{28,8}{144} = 0,2 \text{ моль}$$

$$m(\text{HI}) = 0,2 \cdot 127 = 25,4 \text{ г}$$

Ответ: H_2MoO_3 ; 25,4 г



№5.2



$n(AgNO_3)$ - хлетмага $n(NO_2) = x$ моля, $O_2 = 0,5x$ моля

$n(KNO_3)$ - y моля $n(O_2) = 0,5y$ моля

Масса = $19,5 \cdot 2 = 39$ г/моля

$$M = \frac{m}{n} \quad 39 = \frac{46x + 16x + 16y}{x + 0,5x + 0,5y}$$

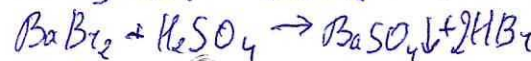
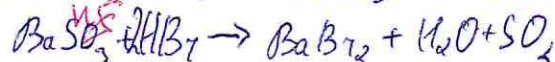
$$58,5x + 19,5y = 62x + 16y$$

$x = y$

$$\omega(AgNO_3) = \frac{170x - 100 \cdot 16}{170x + 100x} = 62,73\%$$

Ответ: 62,73%

№6.2



сильно

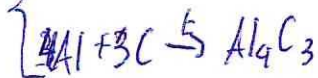
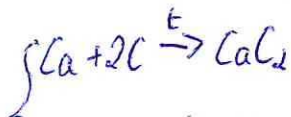


№7.2

$$n(\text{Ca})_{\text{исх}} = 2x \text{ моль}$$

$$n(\text{Al})_{\text{исх}} = 2y \text{ моль}$$

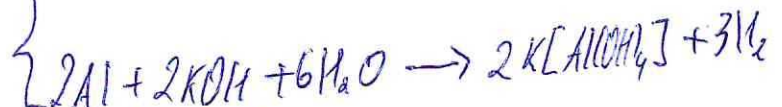
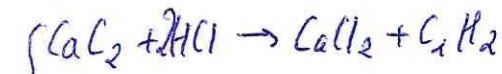
при разложении $n(\text{Ca}) = x \text{ моль}$
 $n(\text{Al}) = y \text{ моль}$



~~$$n(\text{C}_2\text{H}_2) = n(\text{Ca}) = x \text{ моль}$$~~

~~$$n(\text{CH}_4) = \frac{3}{4}n(\text{Al}) = 0,75y \text{ моль}$$~~

~~$$m_{\text{исх}} = \frac{64,8}{22,4} = 0,75 \text{ моль}$$~~



$$n_1(\text{H}_2) = n(\text{Ca}) = x \text{ моль}$$

$$n_2(\text{H}_2) = \frac{3}{2}n(\text{Al}) = 1,5y \text{ моль}$$

$$m_{\text{исх}} = \frac{26,88}{22,4} = 1,2 \text{ моль}$$

$$\begin{cases} x + 0,75y = 0,75 \\ x + 1,5y = 1,2 \end{cases} \Leftrightarrow \begin{cases} 1,2 - 1,5y = 0,75 \\ x = 1,2 - 1,5y \end{cases}$$

$$\begin{cases} y = 0,6 \text{ моль} \\ x = 0,3 \text{ моль} \end{cases}$$

$$m_{\text{исх}} = (0,6 \cdot 2 \cdot 27) + (0,3 \cdot 2 \cdot 40) = 32,4 + 24 = 56,4 \text{ г}$$

Ответ: 56,4 г



8-2

$$\nu(\text{NH}_3) : \nu(\text{CO}) = 4:1$$

$$n(\text{CO}) = x$$

$$17.4x + 28x = 79.2$$

$$n(\text{NH}_3) = 4x$$

$$x = 0.825$$

$$m(\text{амин}) = 79.2 \text{ г}$$

$$n(\text{NH}_3) = 0.825 \cdot 4 = 3.3 \text{ моля}$$



$$m(\text{AlCl}_3) = 1068 \cdot 0.15 = 160.2 \text{ г}$$

$$n(\text{AlCl}_3) = \frac{160.2}{133.5} = 1.2 \text{ моля}$$

AlCl₃ в избытке 0.1 моля

$$m_{\text{пра}} = 1068 + 561 - 851.8 = 1038.3 \text{ г}$$

$$\omega(\text{AlCl}_3) = \frac{13.35 \cdot 100\%}{1038.3} = 1.286\%$$

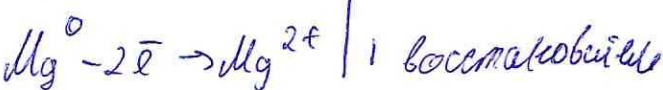
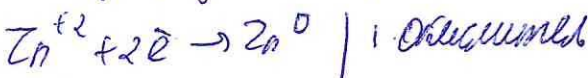
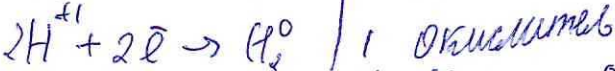
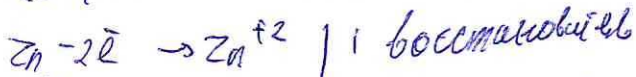
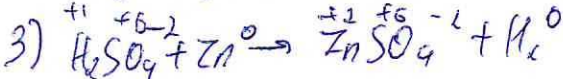
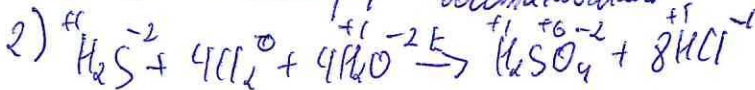
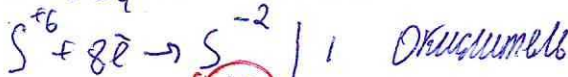
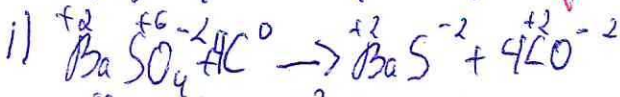
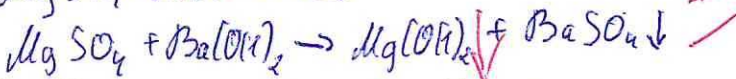
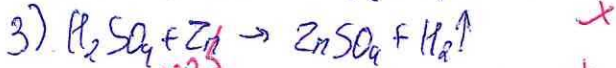
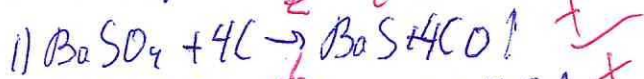
$$\omega(\text{NH}_4\text{Cl}) = \frac{176.55 \cdot 100\%}{1038.3} = 17\%$$

Ответ: 1,286% ; 17%



1/02

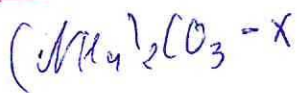
X - BaSO₄



(+ / -)

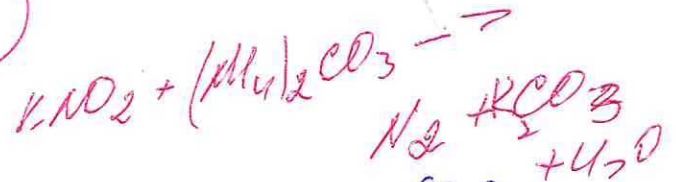


№10.2



$$\frac{3x + 2y}{y} = 11$$

$$x = 3y$$



$$n(NH_3) = 6y, n(CO_2) = 3y$$

$$n(KNO_2) = y$$

$$6y \text{ изобразилась} = 10y$$



$$6y - 3y = 3y$$

$$\text{масса стала } 10y - 3y = 7y$$

масса уменьшилась в 1,43 раза

Ответ: 1,43 раза

