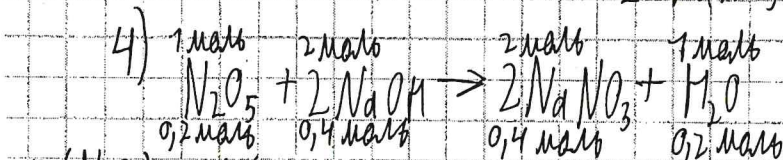
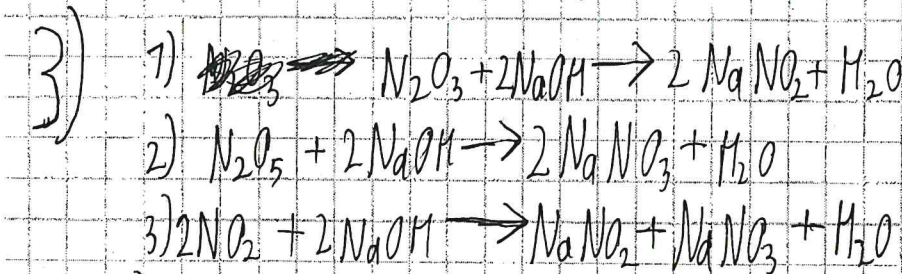
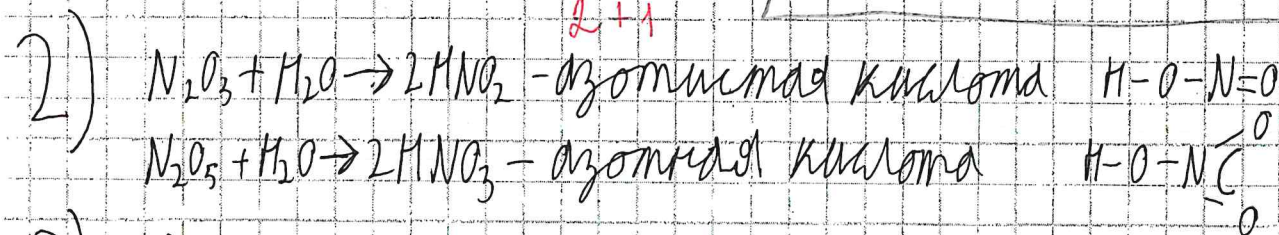
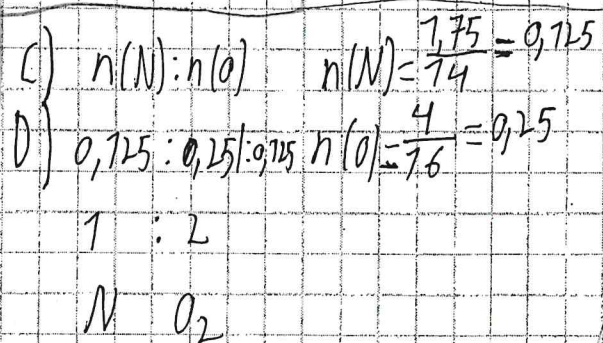
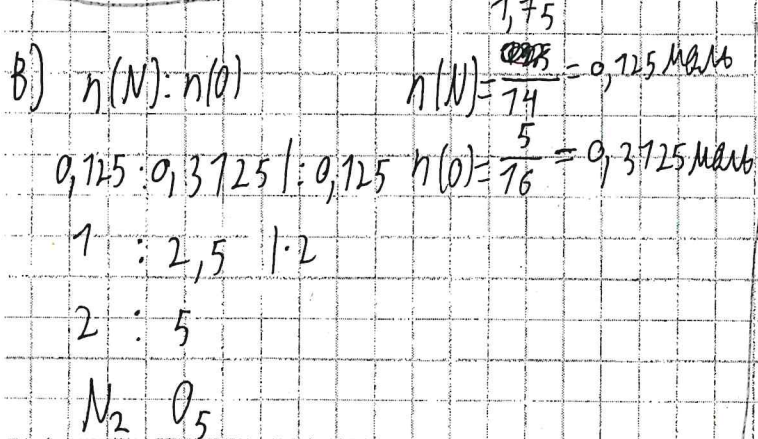
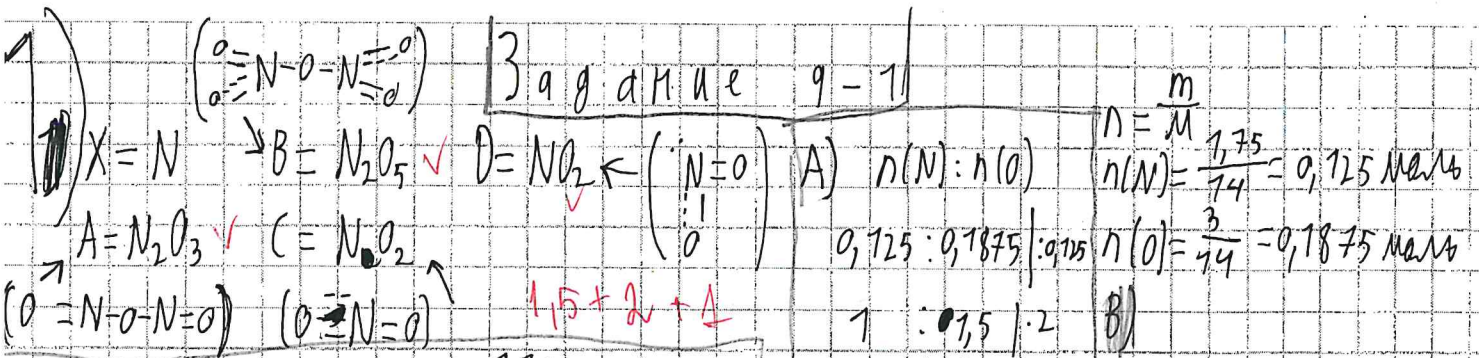


Общий балл	Дата	Ф.И.О. Жюри	Подпись
65	22.03	Слюнико	
Шифр			918204



$m(\text{N}_2\text{O}_5) = 21,6 \text{ г}$
 $V(\text{NaOH}_{\text{р-р}}) = 86 \text{ мл}$
 $\omega(\text{NaOH}) = 16\% = 0,16$
 $\rho(\text{NaOH}_{\text{р-р}}) = 1,1751 \text{ г/мл}$

$n = \frac{m}{M}$
 $n(\text{N}_2\text{O}_5) = \frac{21,6}{108} = 0,2 \text{ моль}$

$n(\text{NaOH}) = \frac{m}{M} \Rightarrow 86 \cdot 1,1751 = 101,0586 \text{ г}$

$\Rightarrow 101,0586 \cdot 0,16 = 16,1694 \text{ г}(\text{NaOH})$

$n(\text{NaOH}) = \frac{16,1694}{40} = 0,4 \text{ моль}$

$m = n \cdot M$

$m(\text{NaNO}_3) = 0,4 \cdot 85 = 34 \text{ г}$

$m(\text{H}_2\text{O}) = 0,2 \cdot 18 = 3,6 \text{ г} + (101,0586 - 16,1694) = 84,8892 \text{ г}(\text{H}_2\text{O})$

$\omega(\text{NaNO}_3) = \frac{m(\text{NaNO}_3)}{m_{\text{р-р}}} \cdot 100\% = \frac{34}{34 + 84,8892} \cdot 100\% = 28,75\%$

Общий балл	Дата	Ф.И.О. Жюри	Подпись
Шифр			918294

Задание 9-2

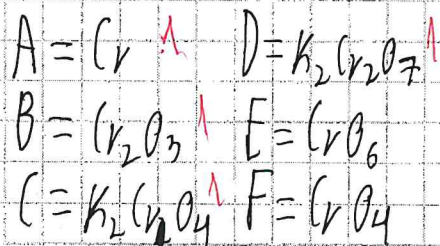
$$\begin{array}{rcl}
 a - c & = & 3 \\
 - & & + \\
 x & & p \\
 = & & = \\
 & k & 8 + d = 12 \\
 - & & = \\
 h - f & = & 6 \\
 = & & + \\
 7 & s + y & = 10 \\
 = & + & - \\
 0 - t & = & 5 \\
 & z & 8 \\
 & = & = \\
 & 9 & 9
 \end{array}$$

$$\begin{array}{rcl}
 a = 8 & \downarrow & k = 14 \\
 b = 10 & \downarrow & m = 2 \\
 c = 5 & \downarrow & n = 7 \\
 d = 4 & \downarrow & o = 7 \\
 e = 3 & \downarrow & p = 5 \\
 f = 1 & \downarrow & s = 4 \\
 g = 1 & \downarrow & t = 2 \\
 & & x = ??? \\
 & & y = 6 \\
 & & z = 3
 \end{array}$$

15 + 2

Общий балл	Дата	Ф.И.О. Жюри	Подпись
Шифр			918204

3 задание 9-3



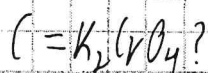
$m = 100$

$m(X) = 68,42\%$
 $m(Y) = 37,58\%$
 $y = 0??$

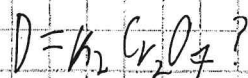
$\frac{68,42}{2 \cdot m(X)} = \frac{37,58}{76n}$

$M(X) = 77,332n$

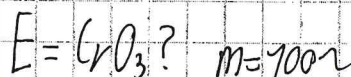
$M(X)$	n
77,33	1
154,66	2
231,99	3



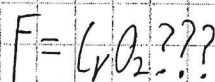
$n(K):n(Cr):n(O)$
 $1 : 0,5 : 2 \cdot 2$
 $2 : 1 : 4$
 K_2CrO_4
 $\checkmark$



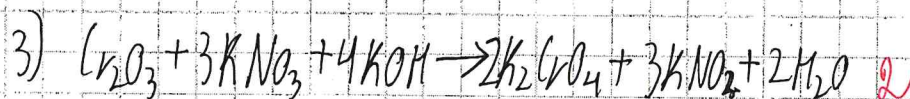
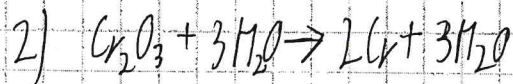
$n(K):n(Cr):n(O)$
 $0,68 : 0,68 : 2,38$
 $1 : 1 : 3,5$
 $2 : 2 : 7$
 $K_2Cr_2O_7$
 $\checkmark$



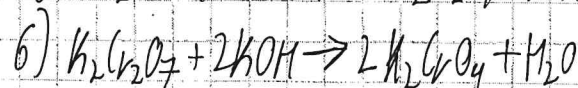
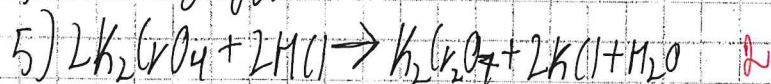
$n(Cr):n(O)$
 $1 : 3$
 CrO_3
 $\checkmark$



$n(Cr):n(O)$
 $1,79 : 2,38$
 $1 : 2$
 CrO_2
 $\checkmark$



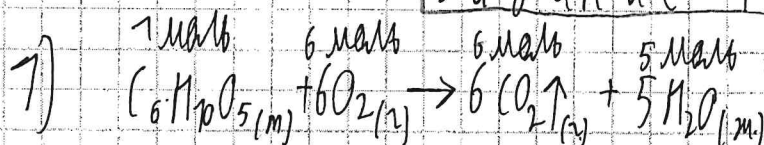
4) Нет в задании



16

Общий балл	Дата	Ф.И.О. Жюри	Подпись
Шифр			918204

Задание 9-4



2) $6 \cdot (-394) = -2364 \text{ кДж}$

$5 \cdot (-286) = -1430 \text{ кДж}$

$-2364 - 1430 = -3794 \text{ кДж}$

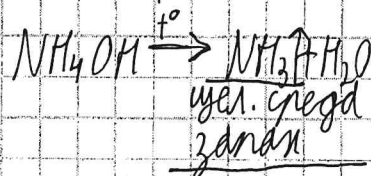
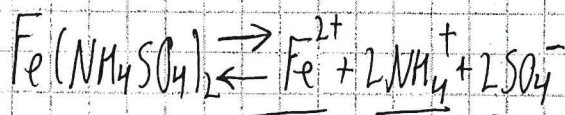
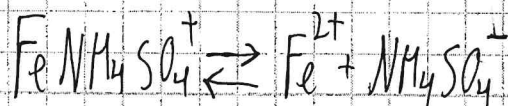
~~-3794 кДж~~ $-3794 - (-7060) = -2734 \text{ кДж} \Rightarrow \text{выделилось } 2734 \text{ кДж (1 моль)}$

3) $n = \frac{m}{M} \cdot \frac{5000}{860} = 5,81 \text{ моль}$ ~~моль~~ ^{моль}

$5,81 \cdot 2734 = 15884,54 \text{ кДж}$ (выделилось из 5 кг)

Общий балл	Дата	Ф.И.О. Жюри	Подпись
Шифр			

Задача 9-5

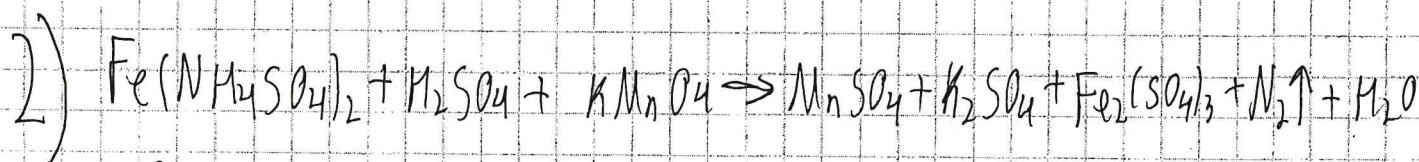


1,5



бел. осадок

1



$$\frac{2,975}{29,75} \cdot 100\text{мл}$$

$$\frac{0,14875}{0,14875} \cdot 100\text{мл} (\text{Fe}(\text{NH}_4\text{SO}_4)_2)$$

$$\frac{0,071929}{7,55} \cdot 100\text{мл} (\text{KMnO}_4)$$

$$w(\text{Fe}(\text{NH}_4\text{SO}_4)_2) = \frac{m(\text{Fe}(\text{NH}_4\text{SO}_4)_2)}{m_{\text{р-р}}} = \frac{0,14875}{5,14875} \cdot 100\% = 2,88\%$$

$$m(\text{H}_2\text{O}) = 5,2$$

$$100\% - 2,88\% = 97,12\% \Rightarrow$$

$$\Rightarrow 97,12\% \text{ нмчелен}$$