

Часть 1

Олимпиада: **Химия 10 класс (1 часть)**

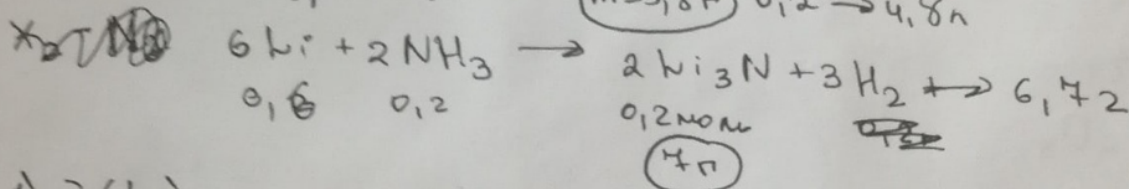
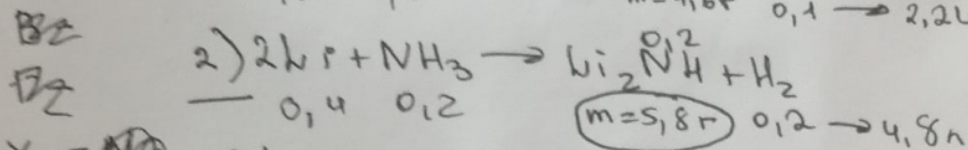
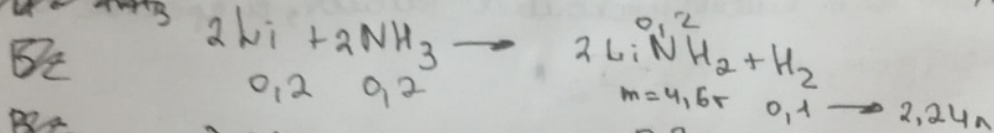
Шифр: **21300363**

ID профиля: **868408**

Вариант 2

$$w=3$$

$$1) \nu(Li) = \frac{m}{M} = \frac{1,4r}{7\%_{\text{моль}}} = 0,2 \text{ моль}; \nu(NH_3) = \frac{4,48r}{22,4\%_{\text{моль}}} = 0,2 \text{ моль}$$



$$1) \nu(Li)$$

$$\frac{\nu(Li)}{\nu(LiNH_2)} = \frac{2}{2} = \frac{1}{1} \Rightarrow \nu(LiNH_2) = 0,2 \text{ моль}; m(LiNH_2) = \nu \cdot M = 0,2 \cdot 23 = 4,6r$$

$$2) \nu(Li)$$

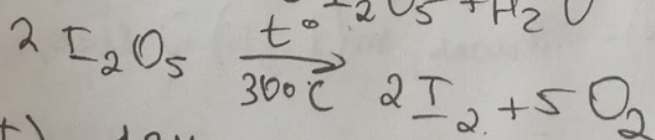
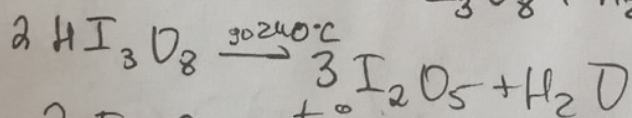
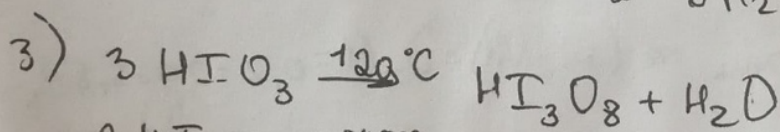
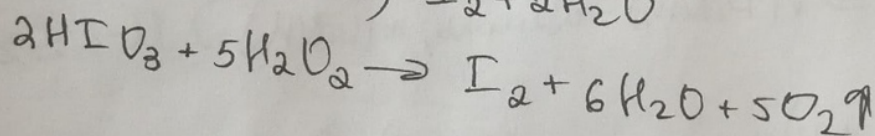
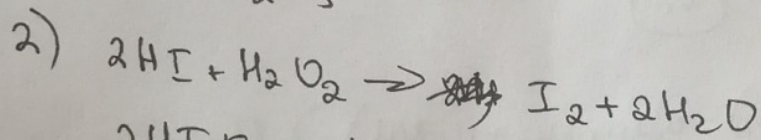
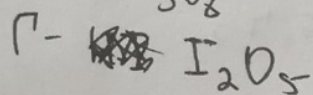
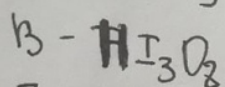
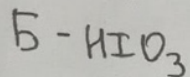
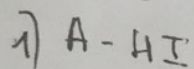
$$\frac{\nu(Li)}{\nu(Li_2NH)} = \frac{2}{1} \Rightarrow \nu(Li_2NH) = 0,2 \text{ моль}; m(Li_2NH) = \nu \cdot M = 0,2 \cdot 29 = 5,8r$$

$$\nu(Li)$$

$$\frac{\nu(Li)}{\nu(Li_3N)} = \frac{6}{2} = \frac{0,6}{0,2} \Rightarrow \nu(Li_3N) = 0,2 \text{ моль}; m(Li_3N) = \nu \cdot M = 0,2 \cdot 35 = 7r$$

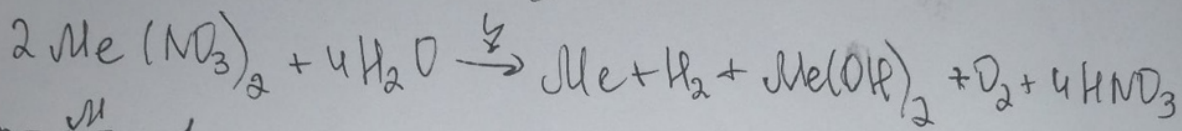
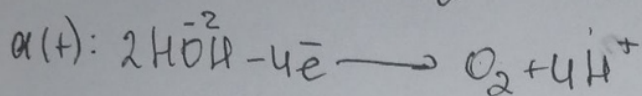
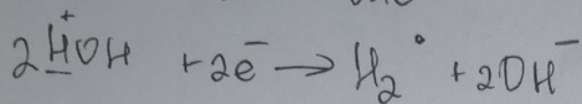
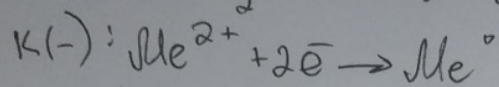
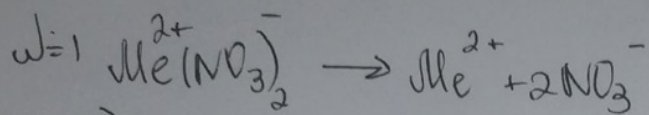
$$n = 2.$$

Если ~~это~~ может иметь несколько значений, и простое в-во выписывается. в основном, то $X_2 - I_2$



$$n(I) = \frac{124 \cdot 3}{124 \cdot 3 + 1 + 48} = 0,444.$$

$$\frac{M(HI_3 O_8)}{M(HI O_3)} = 2,9 = \frac{510}{176} = 2,9$$

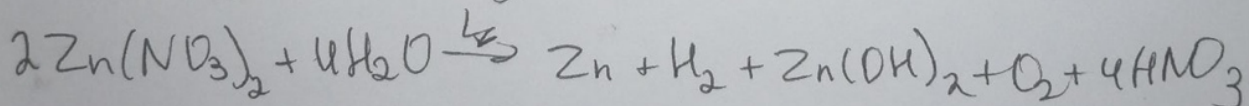
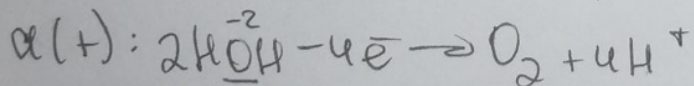
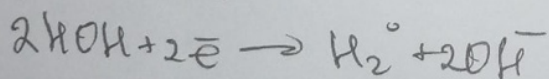
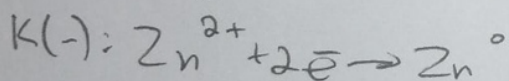
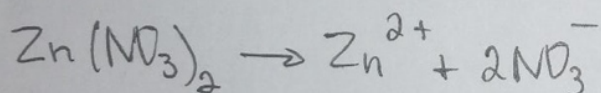


$$m = \frac{M}{n} \cdot \frac{1}{F} \cdot \Delta t \cdot I \quad \Delta E = 23160 \text{ c}$$

$$I = 5 \text{ A}$$

$$M = \frac{m \cdot n \cdot F}{\Delta t \cdot I} = \frac{41,4 \cdot 2 \cdot 96500}{23160 \cdot 5} = 69 \text{ g/mol}$$

Me - Zn



Часть 2

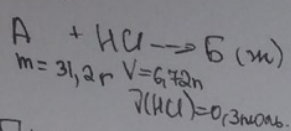
Олимпиада: **Химия 10 класс (2 часть)**

Шифр: **21300363**

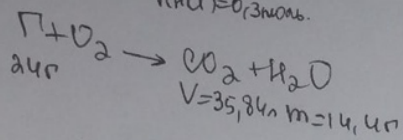
ID профиля: **868408**

Вариант 2

$w = 5$.



Проверка на кислород.



$\begin{cases} V(CO_2) = 1,6 \text{ моль}; V(C) = 1,6 \text{ моль}; m(C) = 19,2 \text{ г} = 20,8 \text{ г} \\ V(H_2O) = 0,8 \text{ моль}; V(H) = 1,6 \text{ моль}; m(H) = 1,6 \text{ г} \end{cases}$
 $\Rightarrow$ кислород есть!

$m(O) = 3,2 \text{ г}; V(O) = 0,2 \text{ моль}$

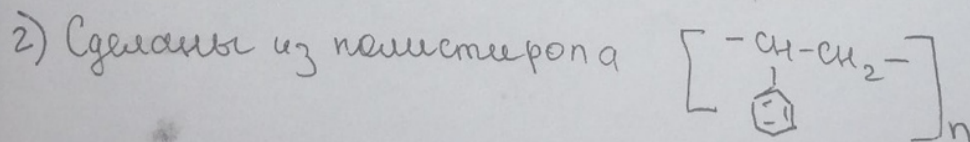
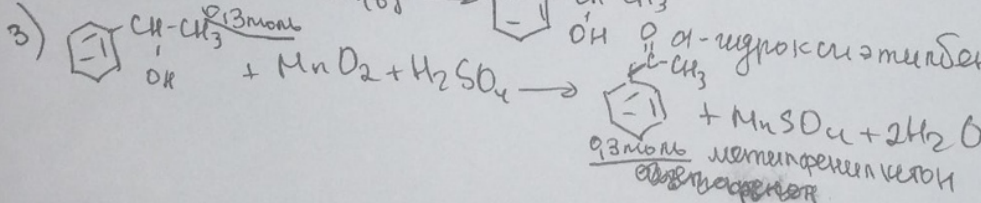
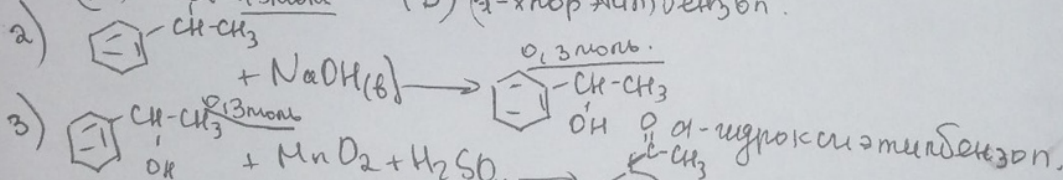
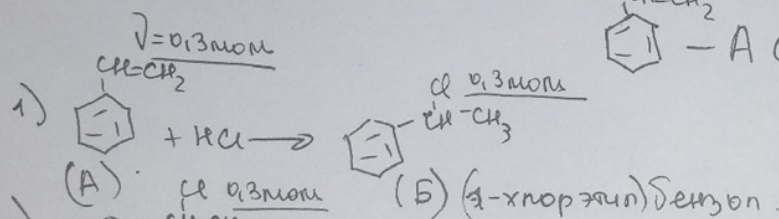
$V(C) : V(H) : V(O) = 1,6 : 1,6 : 0,2$

$8 : 8 : 1 \Rightarrow C_8H_8O$

$V(HCl)$

$\frac{V(HCl)}{V(A)} = \frac{1}{1} \Rightarrow V(A) = 0,3 \text{ моль}; M(A) = \frac{m}{V} = \frac{31,2}{0,3} = 104 \text{ г/моль}$

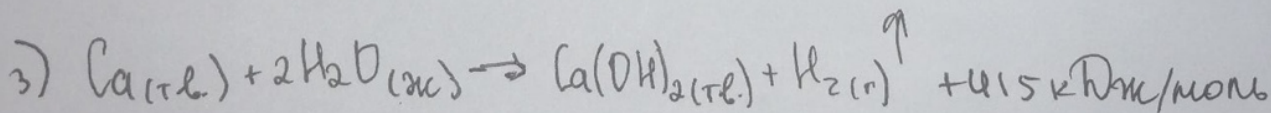
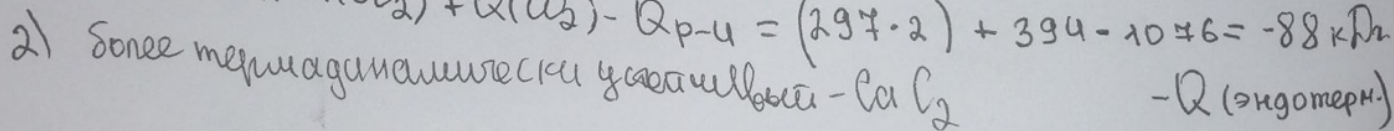
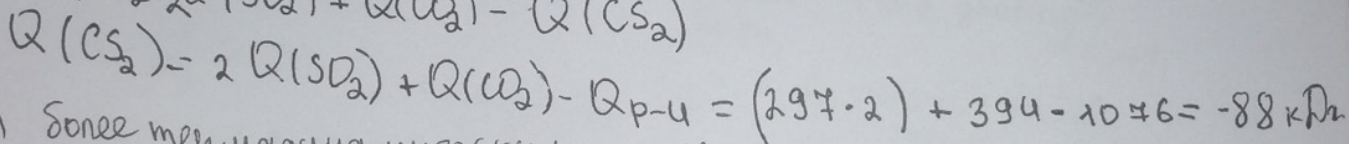
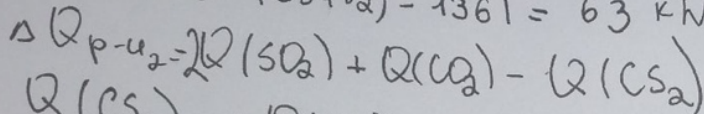
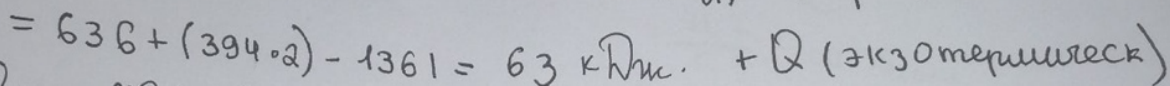
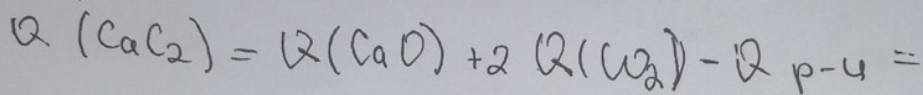
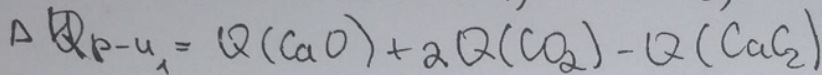
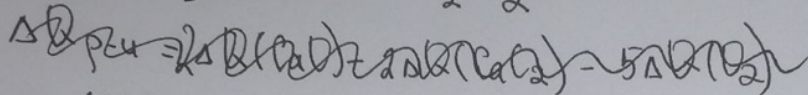
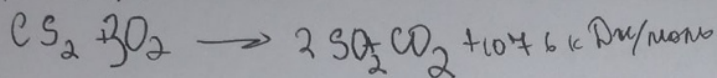
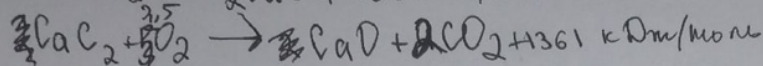
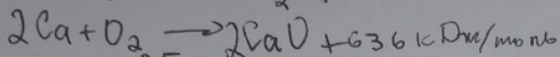
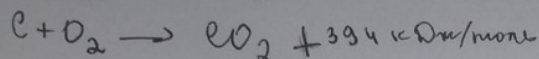
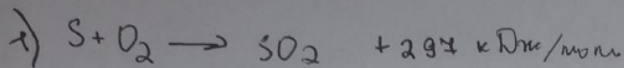
A - аромат. УВ с двойной связью
C=Cc1ccccc1 - A (этилбензол)
 стирол



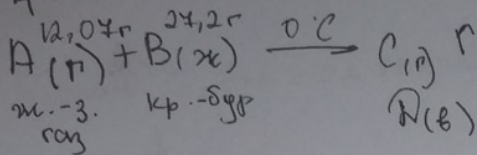
3) $V(C_8H_8O) = 0,3 \text{ моль}; M = 120 \text{ г/моль}; m_{\text{теор}} = 120 \cdot 0,3 = 36 \text{ г}$

$\eta = \frac{24}{36} \cdot 100 = 66,67 \%$

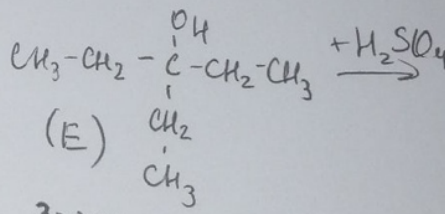
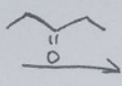
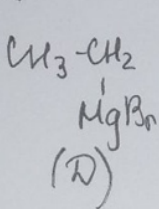
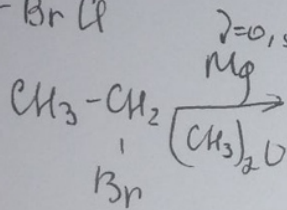
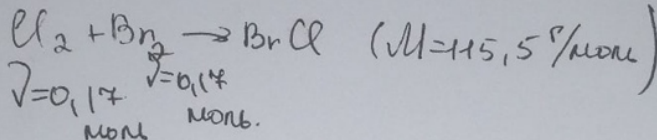
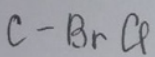
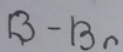
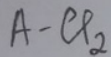
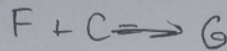
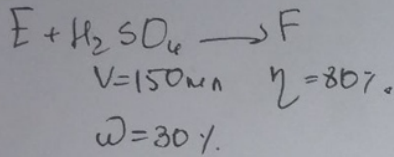
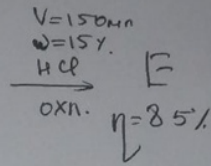
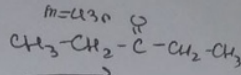
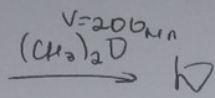
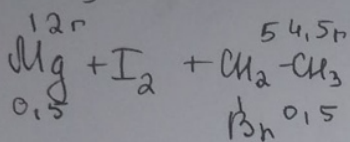
н.г.



$n=4$

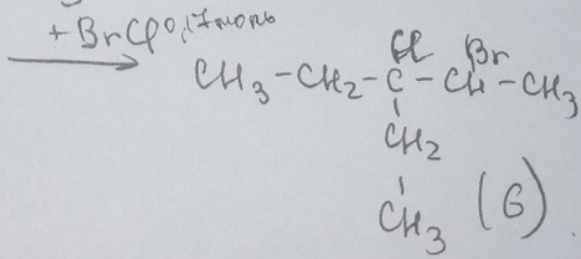
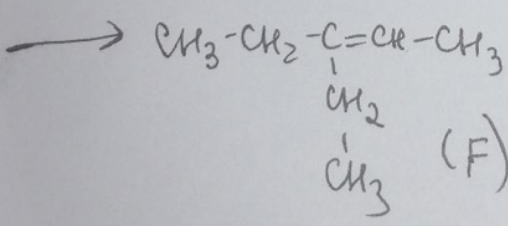


$R(b)=3,98; \quad M=3,98 \cdot 29 = 115,42 \text{ г/моль}$



этилмагний бромид

3-этилпентанол-3



$m=0,17 \text{ моль}$
 $0,17 \cdot 213,5 = 36,3$