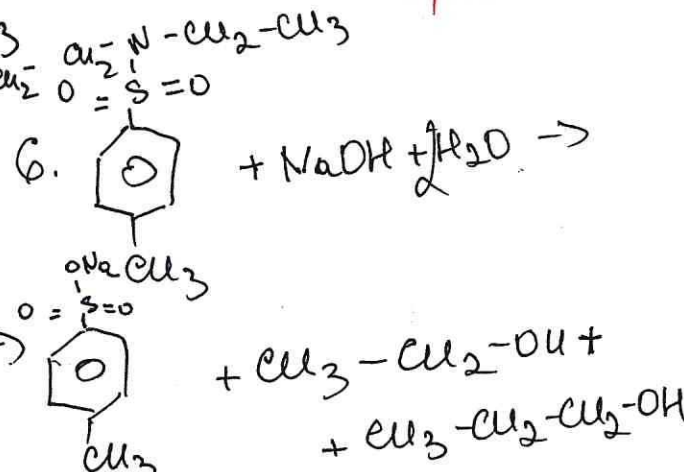
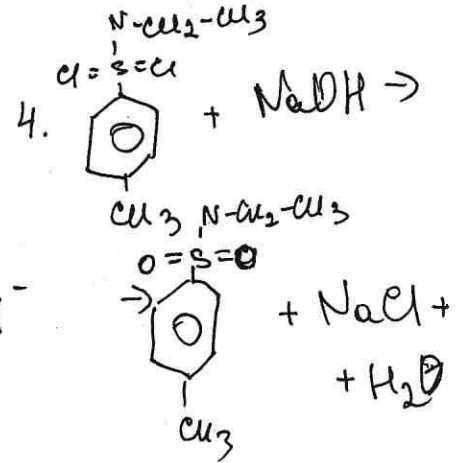
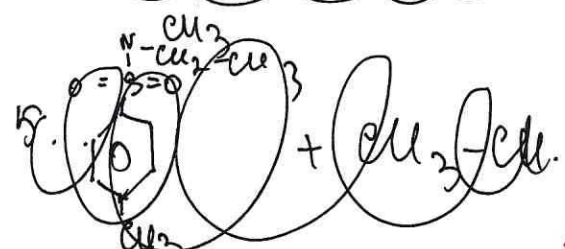
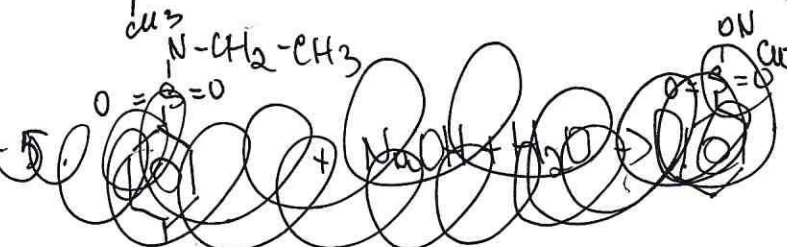
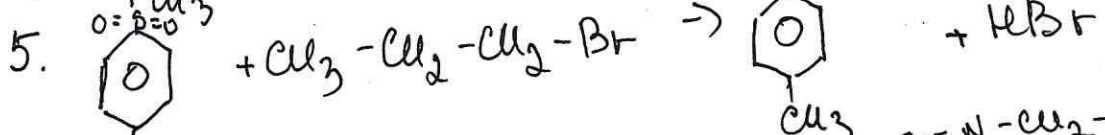
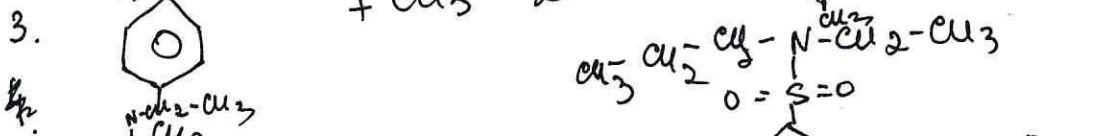
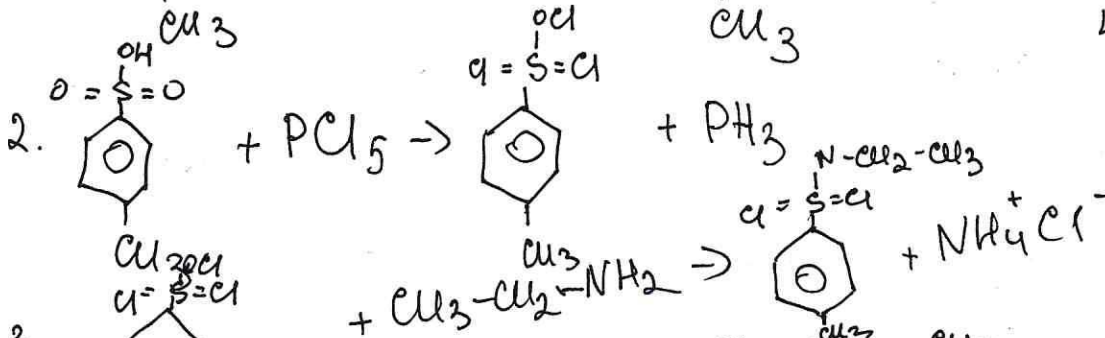
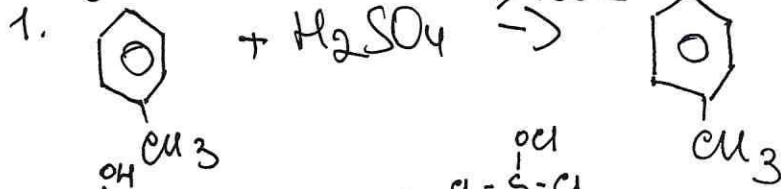


Задача 8.2.



1	2	3	4	5	6	7	8	9	10
6	8	8	10	12	12				20

Задача 3.2.

Дано: $V(\text{CH}_3\text{COOH}) = 50 \text{ мл}$
 $\kappa(\text{CH}_3\text{COOH}) = 12,46 \text{ моль/л}$
 $\rho(\text{CH}_3\text{COOH}) = 1,06852 \text{ г/мл}$
 $w(\text{H}_2\text{O}) = x\%$

Найти: pH-?

СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

1 2 3 4

$$m(\text{C}_3\text{H}_7\text{COOH}) = 50 \text{ мл} \cdot 1,0685 \text{ г/мл} = 53,425 \text{ г}$$

$$n(\text{C}_3\text{H}_7\text{COOH}) = \frac{53,425 \text{ г}}{60 \text{ г/моль}} = 0,89 \text{ моль}$$

$$M(\text{C}_3\text{H}_7\text{COOH}) = 12 \cdot 3 + 8 + 16 \cdot 2 = 60 \text{ г/моль}$$

$$S(\text{цилиндра}) = 25 \text{ см} \cdot 5 \text{ см} = 125 \text{ см}^2 \quad V = 25 \cdot 3,14 \cdot 6 = 490,625$$

$$V(\text{C}_3\text{H}_7\text{COOH}) = 0,89 \cdot 12,46 \text{ моль/л} = 11,1 \text{ л} = 490,625 \text{ см}^3$$

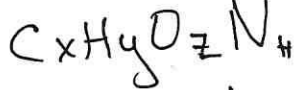
$$490,625 \text{ см}^3 - 100\%$$

$x - 60\%$ $x - 294,5 \text{ см}^3$ $x - 294,5 \text{ см}^3$ - место, которое занимает раствор.

$$pK_a(\text{C}_3\text{H}_7\text{COOH}) = 4,76 \quad M(\text{H}_2\text{O}) = 18 \text{ г/моль}$$

Задача 6.2

$$pH = 0,5 \cdot (4,76 - \lg 2,2) = 2,2 + 8$$



$$M(\text{Br}) = 80 \text{ г/моль}$$

$$m_{\text{Br}} = 0,4706 \cdot 80 = 37,65 \text{ г}$$

$$n(\text{Br}) = \frac{37,65}{80} = 0,47 \text{ моль}$$

$$w(\text{Br}) = \frac{47,06\%}{100} = 0,4706$$

$$M(\text{BrM}_3\text{CHCOOH}) = \frac{80}{0,47} = 170 \text{ г/моль}$$

$$M(\text{R}) = 15$$

$$n(\text{Br}) = 2n(\text{C}_x\text{H}_y\text{O}_z\text{N}_n) = 0,94 \text{ моль} \Rightarrow m(\text{C}_x\text{H}_y\text{O}_z\text{N}_n)$$

$$= 12x + y + 16z + 14n = 40,422$$

$$M = \frac{80}{0,22925} = 349$$

Пусть $m(\text{C}_x\text{H}_y\text{O}_z\text{N}_n) = 100 \text{ г} \Rightarrow M(\text{C}) = 12 \text{ г/моль}$

$$M(\text{H}) = 1 \text{ г/моль}$$

$$M(\text{O}) = 16 \text{ г/моль}$$

$$M(\text{N}) = 14 \text{ г/моль}$$

$$m(\text{C}_x\text{H}_y\text{O}_z\text{N}_n) = 40,422$$

$$n(\text{C}) = \frac{40,42}{12} = 3,37 \text{ моль}$$



n(O) = 40,42 / 16 = 2,53 моль

n(N) = 40,42 / 14 = 2,89 моль

m(O) = 2,53 · 16 = 40,482

m(C) = 3,37 · 12 = 40,442

m(N) = 2,89 · 14 = 40,462

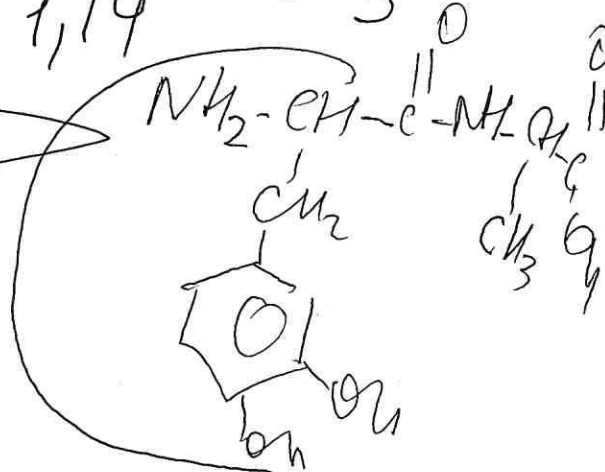
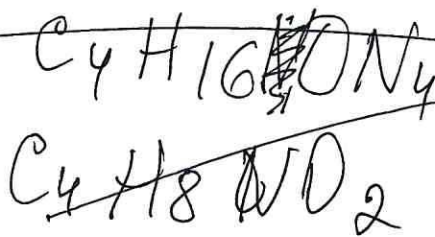
n(H) = 40,42 моль

m(H) = 40,422

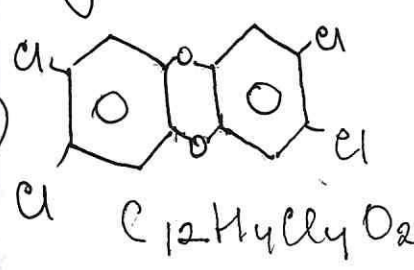
m(C_xH_yO_zN_n) = 40,48 + 40,46 + 40,42 + 40,44 = 161,82

+ 10C

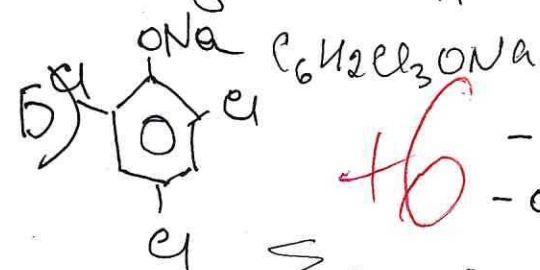
n(C) : n(H) : n(O) : n(N) = x : y : z : n = 3,37 : 40,42 : 2,53 : 2,89 = 1,33 : 16 : 1 : 1,14



Задача 1.2.

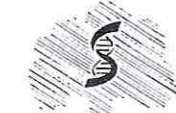


2,3,7,8-тетрахлоридбензо-пара-диоксин



+6 - 2,4,5-трихлор-ореноевая натриевая соль

Σm = 81655



СЕЧЕНОВСКИЙ УНИВЕРСИТЕТ

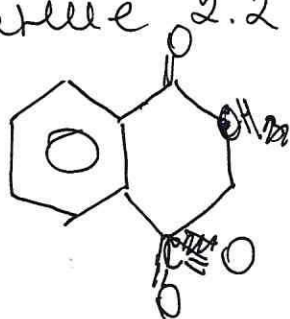
Grading scale: 1 2 3 4

12x + 6y = 0,3
4x + 3y = 0,11

m(1) = 6,44
m(2) = 2,195

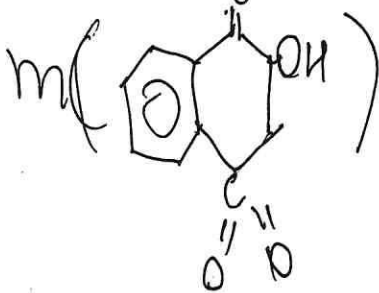
$$\begin{aligned} n(\text{Cl}) &= 0,4 & \frac{x}{y} &= \frac{2}{1} & c &= 1,805 \cdot 10^{23} \\ n(\text{C}) &= 0,3 & & & & \\ 12x + 64y &= 0,3 & & & & \\ 4x + 8y &= 0,1 & c &= 0,6622 \cdot 10^{23} & & \\ 10y &= 0,1 & & & & \\ x &= 0,01 & & & & \\ y &= 0,02 & & & & \\ m &= 7,612 & & & & \end{aligned}$$

Задача 2.2



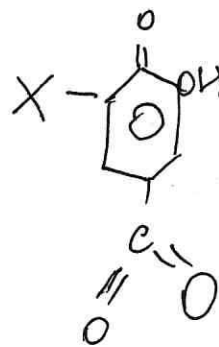
y - число молей сахара
в растворе
 $w(\text{K}) = 0,5 \cdot 0,39$

$$y = 0,028 \Rightarrow m(x) = \frac{(0,5 - y)56 + 239y}{29}$$



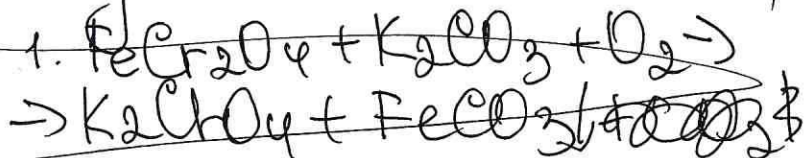
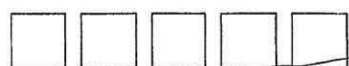
$$m = 6,692$$

$$w = 26,77\%$$

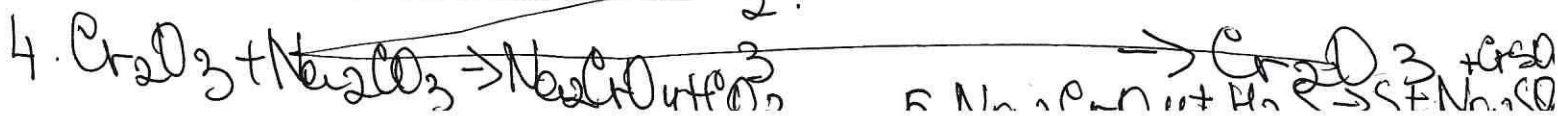


Задача 4.2 см →

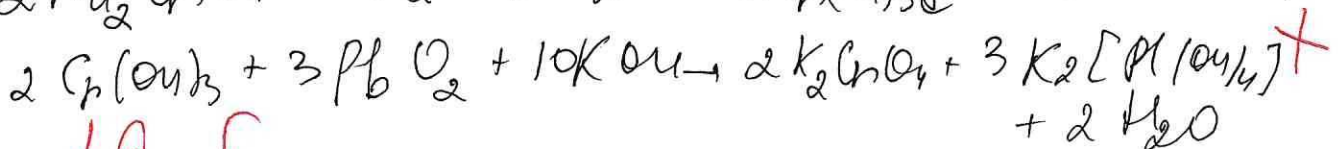
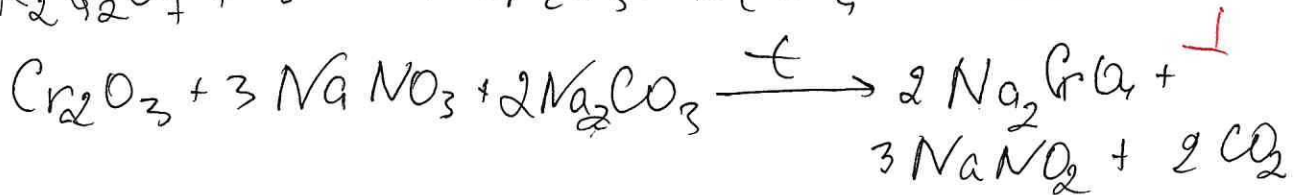
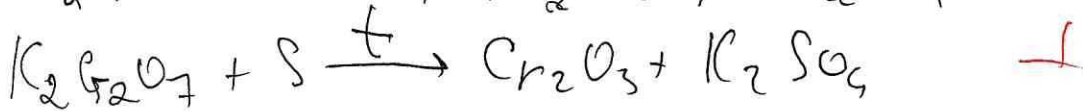
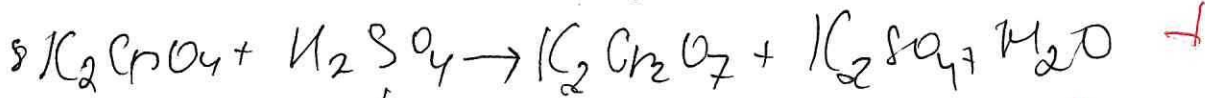
СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ



2.



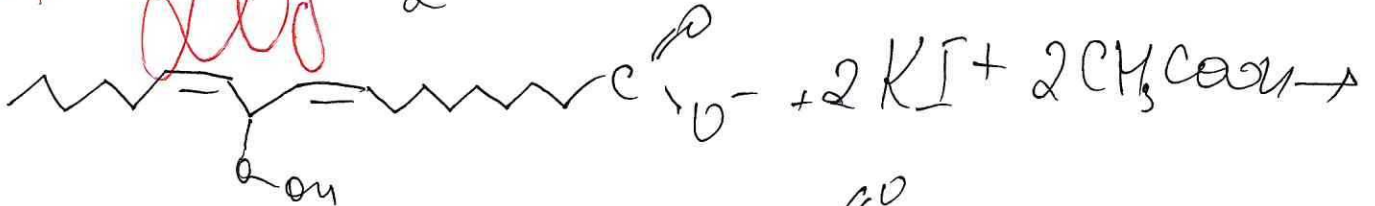
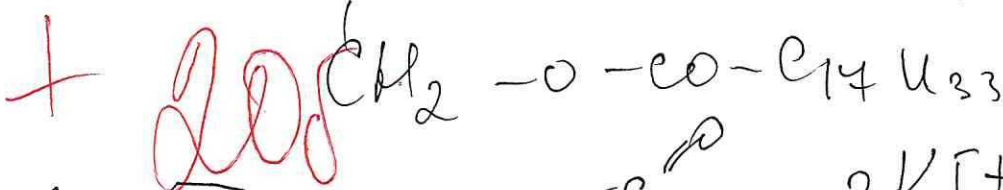
Задача
4.2.



12.8.

Задача

10.2



$$V_0 - V_k - 3,5 - 0,2 = 3,3$$

$$n(Na_2S_2O_3) = 0,033$$

$$n(I_2) = \frac{1}{2} n^{\uparrow} = 0,0165$$

$$n(O) = 0,0165 \cdot 2 = 0,033$$

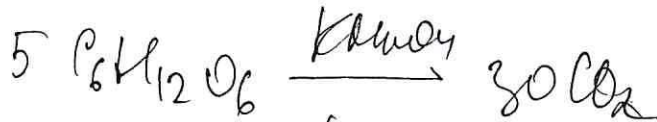
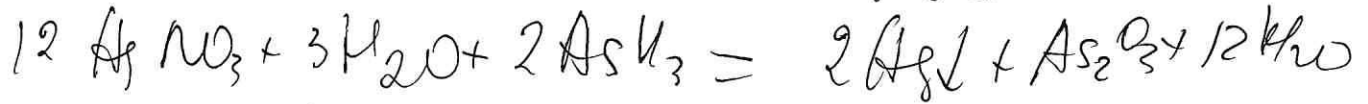
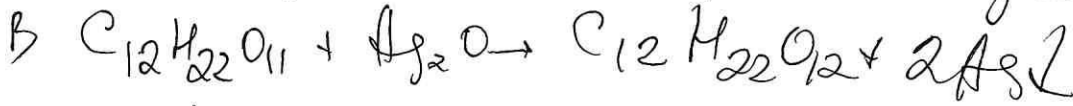
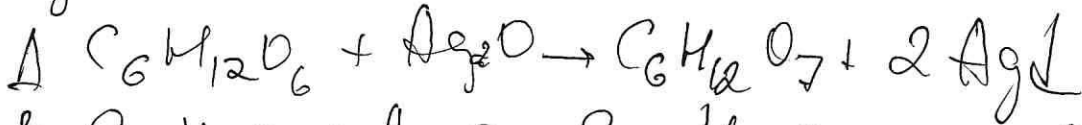
$$n(OH) = 3,17 - 0,033 = 3,137$$

СЕЧЕНОВСКИЙ
УНИВЕРСИТЕТ

□ □ □ □ □

$$I_k = 3,17 \text{ мл раствора}$$

Задача 4.2



$n(A) = x \quad n(B) = y \quad x + y = 915$

$6x + 12y = 112$

$m_{см} = 35,1$



$m(C_6H_{12}O_6) = 14,56 (80\%)$

78.

