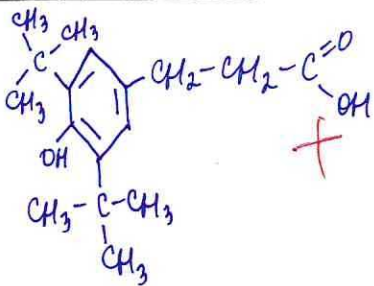
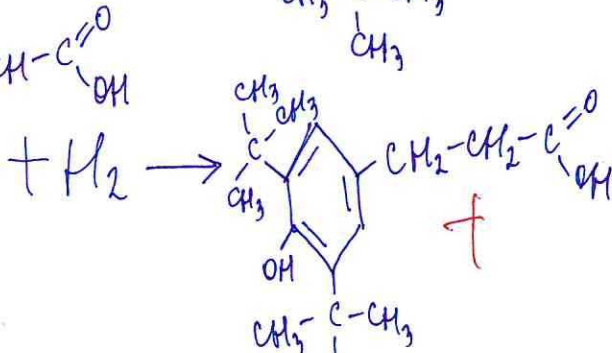
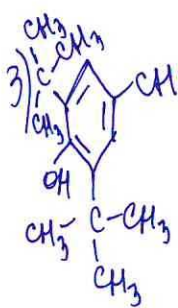
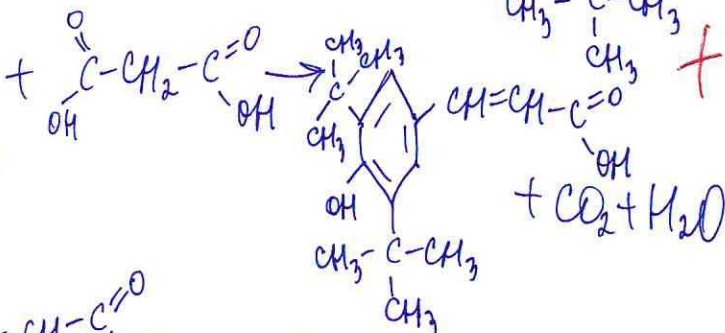
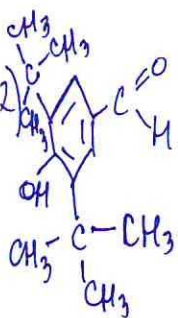
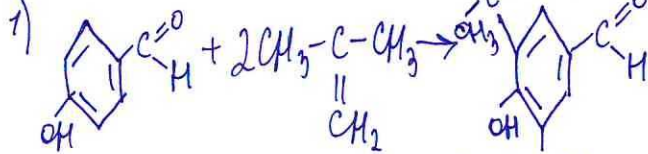


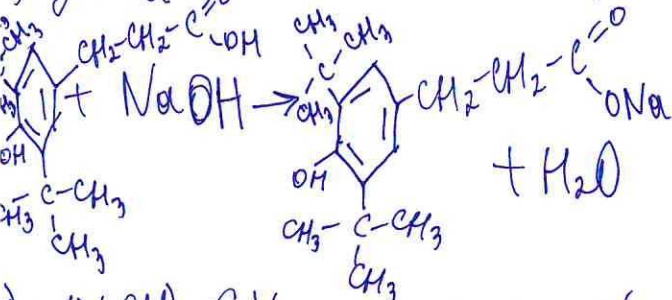
№10.4.
Вещество:



Реакции:



Задача:



1) $n(\text{NaOH}) = C \cdot V = 0,0028 \cdot 0,1 = 0,00028 \text{ (моль)}$

2) $n(\text{C}_{17}\text{H}_{26}\text{O}_3) = 0,00028 \text{ (моль)}$

3) $m(\text{C}_{17}\text{H}_{26}\text{O}_3) = n \cdot M = 278 \cdot 0,00028 = 0,07784 \text{ (г)}$

$M(\text{C}_{17}\text{H}_{26}\text{O}_3) = 12 \cdot 17 + 26 \cdot 1 + 16 \cdot 3 = 278 \text{ (г/моль)}$

4) $0,07782 - 10 \text{ мл}$
 $X - 50 \text{ мл}$
 $X = \frac{50 \cdot 0,07782}{10} = 0,3892 \text{ (г)}$

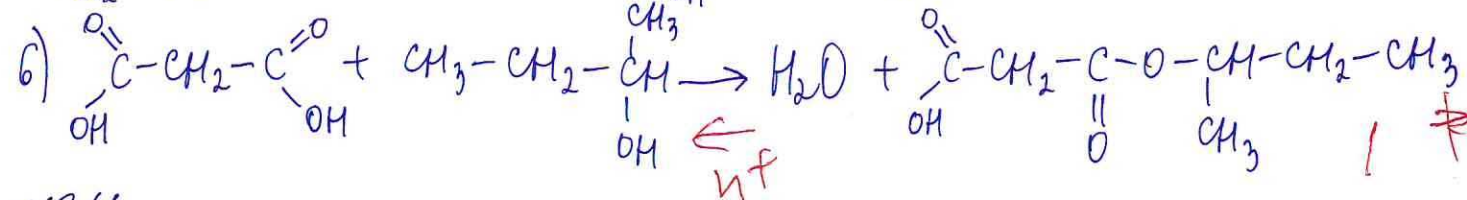
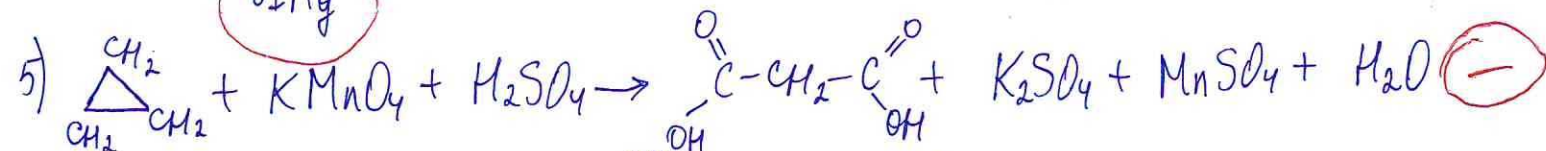
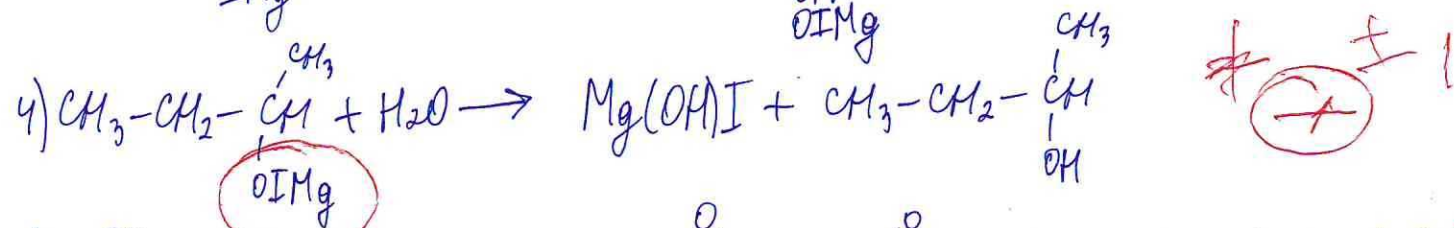
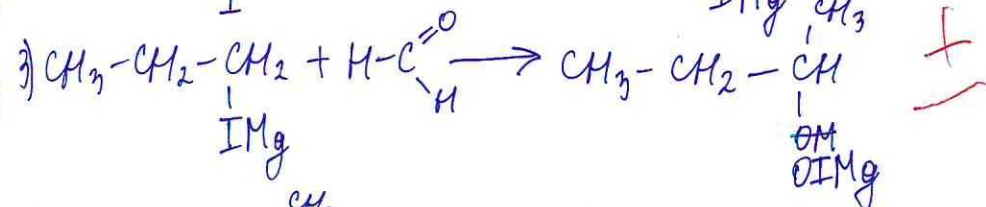
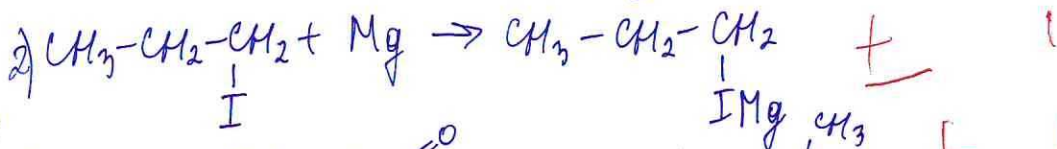
5) $\omega(\text{C}_{17}\text{H}_{26}\text{O}_3) = \frac{0,3892}{0,400} \cdot 100\% = 97,3\%$

Ответ: 97,3%. +

1	2
2	1
3	X
4	5
5	3
6	X
7	6
8	6
9	X
10	18
$\Sigma = 41$	



№7, ч.



№8, ч.



$M(\text{раз. смеси}) = \rho \cdot V_m = 1,161 \cdot 22,4 = 26 \text{ (г/моль)}$

Пусть $n(NH_3) = x$, а $n(F_2) = y$

Тогда $m(NH_3) = 17x$, а $m(F_2) = 38y$

Получаем уравнение:

$17x + 38y = 26(x+y)$

$17x + 38y = 26x + 26y$

$38y - 26y = 26x - 17x$

$12y = 9x$

$\frac{x}{y} = \frac{12}{9} \quad x:y = 12:9 = 4:3$



$M(NF_m) = D(Ne) \cdot M(Ne) = 3,55 \cdot 20 = 71 \text{ (г/моль)}$ +

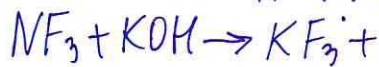
$14 + 19m = 71$

$19m = 71 - 14$

$19m = 57$

$m = 57 : 19$

$m = 3 \rightarrow NF_3$

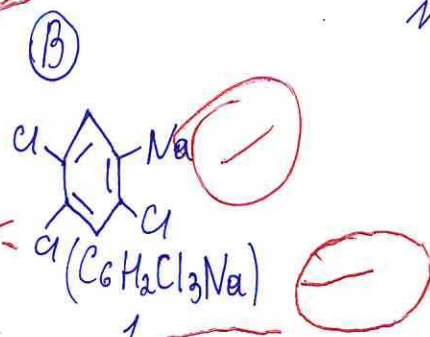
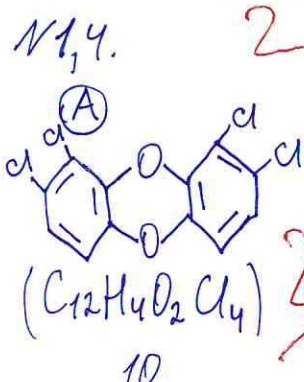
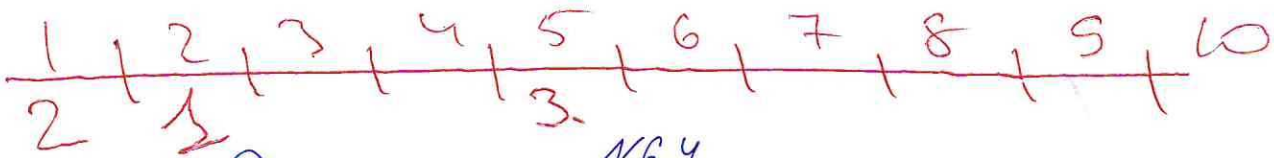


$m(KF_3) = \frac{n}{M} =$

$M(KF_3) = 39 + 19 \cdot 3 = 96 \text{ (г/моль)}$

$\omega_{(KF_3)} = \frac{m(KF_3)}{m(KF_3 + \dots)} \cdot 100\% =$





V6, ч.

$$[X(CO)_4] \quad 480$$

$$28,12 = \frac{12 \cdot 4 \cdot 100}{M(\text{вещ.})}$$

$$M(\text{вещ.}) = \frac{480}{28,12} = 17 \text{ (г/моль)}$$

$$n(Cl) = 4 \cdot 10 + 3 \cdot 1 = 43 \text{ (моль)}$$

$$m(Cl) = 43 \cdot 35,5 = 1526,5 \text{ (г)}$$

$$n(Na) = 2 \cdot 1 \text{ (моль)}$$

$$m(Na) = n \cdot M = 1 \cdot 23 = 23 \text{ (г)}$$

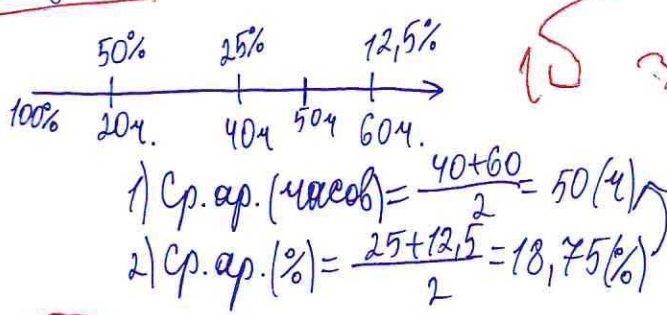
$$\frac{m(Cl)}{m(Na)} = \frac{1526,5}{23} = 66,4 \text{ раз}$$

Ответ: в 66,4 раз

V2, ч.

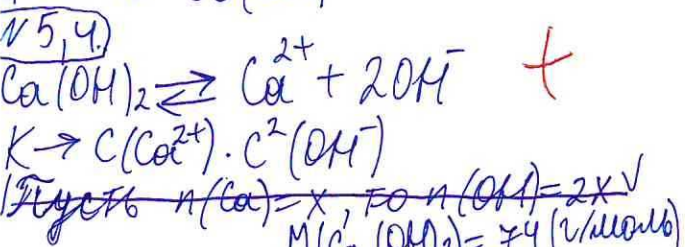
1) 10 мл - 1 мл
x мл - 10 мл
 $x = \frac{10 \cdot 10}{1} = 100 \text{ (мл)}$

2) 0,4 мл - 1 мл
100 - 100 мл
y мл - 100 мл
 $y = \frac{100 \cdot 0,4}{1} = 40 \text{ (мл)}$



35 30 попис.

3) 100 - 40 = 60 (мл)



$$n(Ca(OH)_2) = \frac{0,086}{74} = 1,162 \cdot 10^{-3} \text{ (моль)}$$

$$K \rightarrow 1,162 \cdot 10^{-3} \cdot (2 \cdot 1,162 \cdot 10^{-3})^2 = 6,27 \cdot 10^{-9}$$

СЕЧЕНОВСКИЙ УНИВЕРСИТЕТ

$$pH + pOH = 14$$

$$pH = 14 - pOH$$

$$pH = 14 - 2,6$$

$$pH = 11,4$$

$$pOH = -\log C(OH)$$

$$pOH = -\log 2,324 \cdot 10^{-2}$$

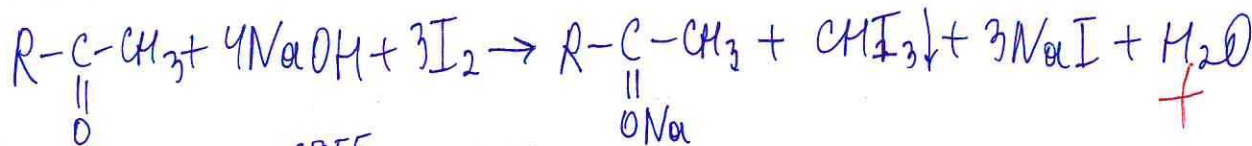
$$= 2,6$$

Ответ: $6,27 \cdot 10^{-9}$; 11,4 = pH.



□ □ □ □ □

№ 4.4.



$$n(CHI_3) = \frac{m}{M} = \frac{29,55}{394} = 0,075 \text{ (моль)}$$

$$M(CHI_3) = 12 + 127 \cdot 3 = 394 \text{ (г/моль)}$$

$$n(I_2) = 3 \cdot 0,075 = 0,225 \text{ (моль)}$$

$$m(I_2) = n \cdot M = 0,225 \cdot 254 = 57,15 \text{ (г)}$$

$$M(I_2) = 127 \cdot 2 = 254 \text{ (г/моль)}$$

$$n(\overset{\overset{C_{сум}}{\text{---}}}{R}) = 0,075 \text{ (моль)}$$

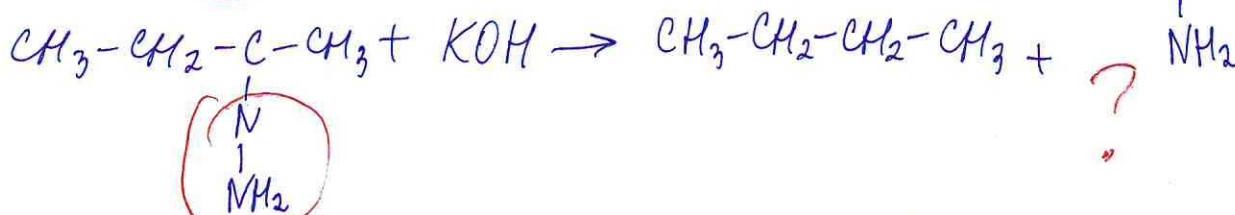
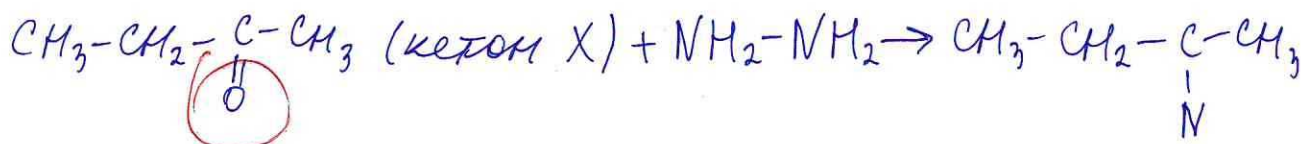
$$M(\overset{\overset{C_{сум}}{\text{---}}}{R}) = \frac{m}{n} = \frac{7,2}{0,075} = 96 \text{ (г/моль)}$$

$$R + 12 + 16 + 23 + 12 + 3 = 96$$

$$R + 66 = 96$$

$$R = 96 - 66$$

$$R = 30 \rightarrow C_2H_6$$



$$m(C_4H_{10}) = n \cdot M = 0,075 \text{ моль} \cdot 58 = 4,35$$

$$M(C_4H_{10}) = 4 \cdot 12 + 10 = 58 \text{ (г/моль)}$$

$$\omega(C_4H_{10}) = \frac{4,35}{5,8} \cdot 100\% = 74\%$$

Ответ: 74%; 57,15 г = m(I₂)

чс.

~~6,35~~
= 1,05

