

.1

1.

«

»

(1), (2)

150⁰

2

1.

100

1

2 ,

0,58

=1,71

1, =2,19

2.

10,0

10,0

=0.1 / .

1 2

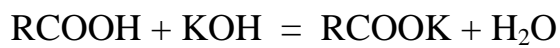
1 2

(1% KMnO₄)

1 2.

1

1.



C₁=0,1 / .

n=0,1×0,1 = 0,01

V₁ = C₂V₂

0,58 .

= 58 / .

1

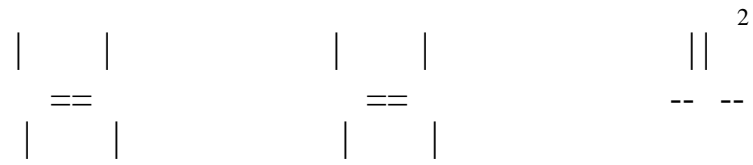
2.

=116 / .

4 4 4.

1

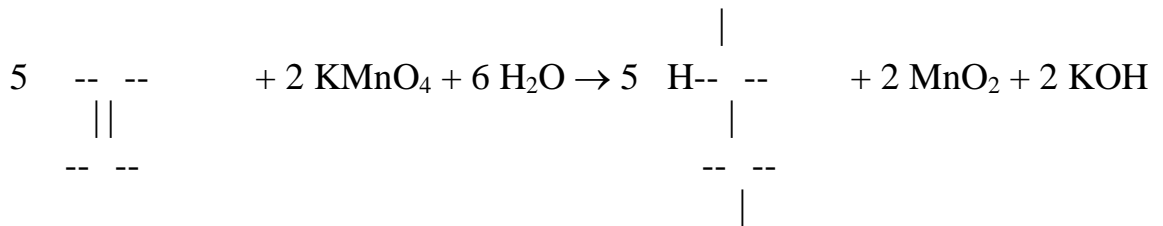
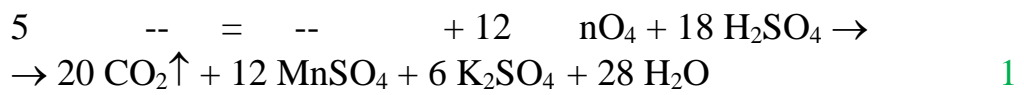
(), (), - .



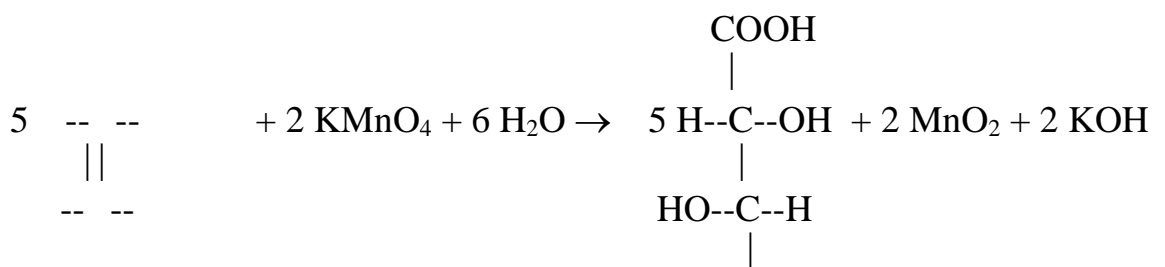
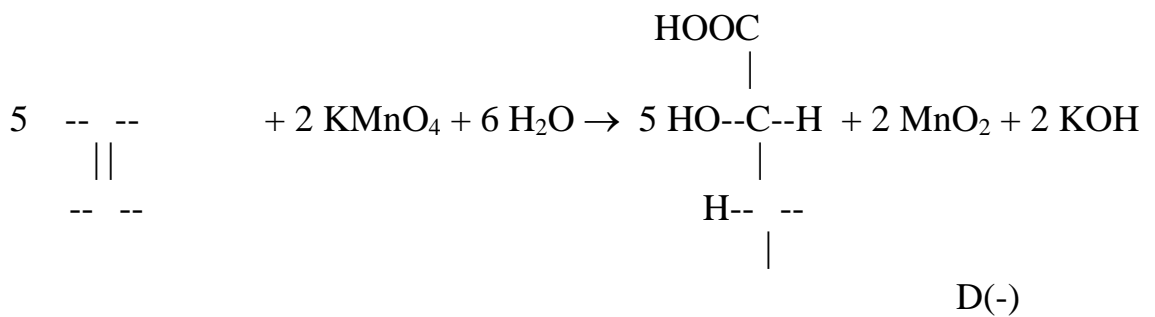
- 1



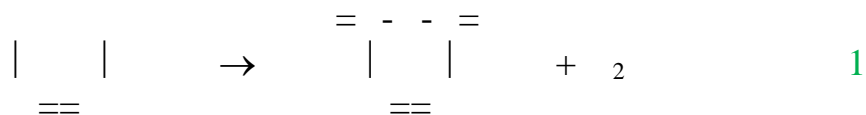
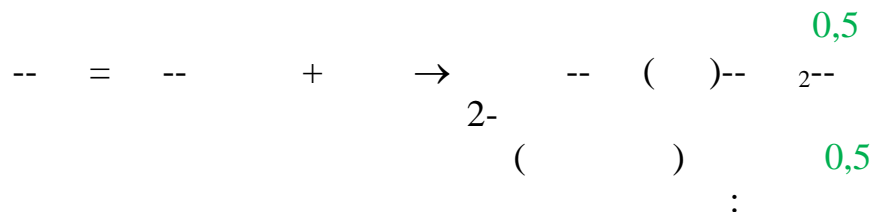
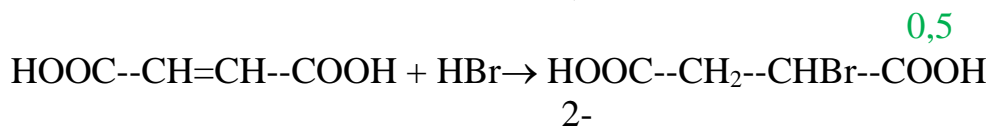
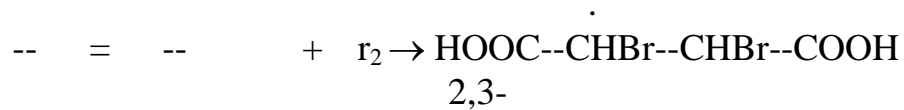
, . 0,5



2,3- (-) 1



COOH L(+)
()
0,5



():
2 6 6 +5 2 → 2 4 2 3 +4 2 0,5

-

10

2.

1894 - , 1,875 / .

40

14.

1

1,5

150 °

42,42 %.

?

?

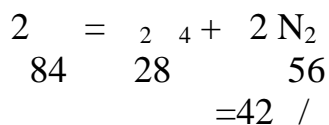
$$=1,875 \times 22,4 = 42 /$$

$$= 28 /$$

1

$$28 / \quad N_2.$$

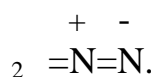
: = 1:2. 1



84 /

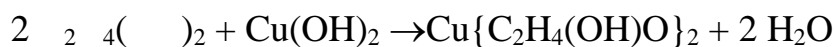
2N2 -

1



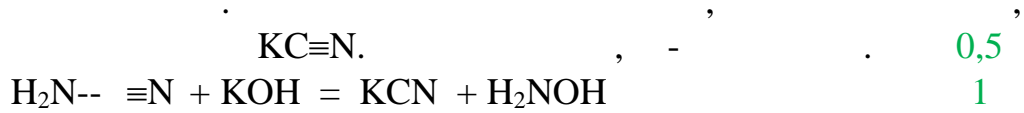
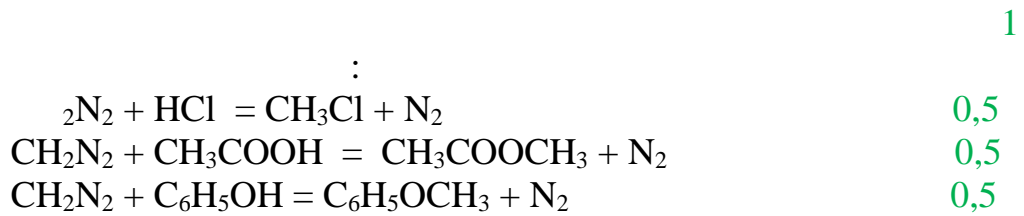
2 ∴

1



$$2N_2 + 1,5 O_2 = CO_2 + H_2O + N_2 \quad M \quad = (44 + 18 + 28):3 = 30 /$$
$$150^0 \quad D_{H_2} = 15.$$

$$=36. D_{H_2}=18.$$



10

3.

10%

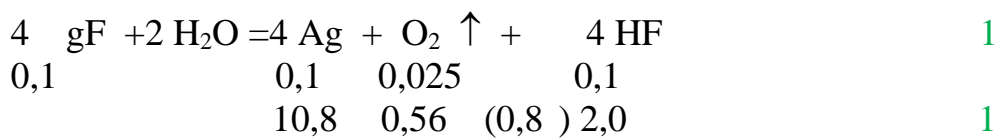
1,12 (. .)

127 .

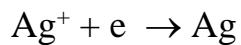
1000

=2,1.

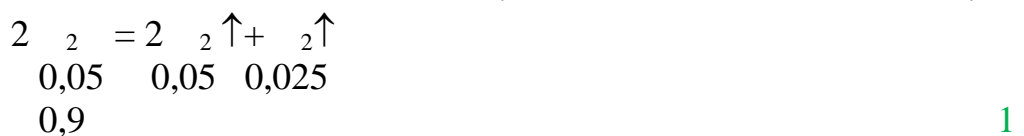
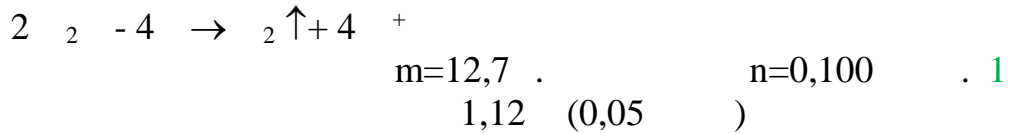
0,1, 0,01, 0,001 / .
10 %?



(-)



(+)



$m=127,0 - 10,8 - 0,8 - 0,9 = 114,5$

$$\omega(F) = 2,0:114,5 = 0,0175 = 1,75\% \quad 1$$

$$\text{HF} \leftrightarrow \text{H}^+ + \text{F}^- \quad \text{pH} = 2,1 \quad C_{\text{H}^+} = 7,94 \times 10^{-3} \quad /$$

$$\alpha = 7,94 \times 10^{-3} / 0,1 = 7,94 \times 10^{-2} \quad 1$$

$$= \alpha^2 / (1 - \alpha); = 0,1 \times (7,94 \times 10^{-2})^2 / (1 - 0,0794) = 6,85 \times 10^{-4} \quad / \quad 1$$

	α	α^+		
0,1	0,0794	0,00794	2,1	
0,01	0,260	0,00260	2,58	1
0,001	0,556	0,000556	3,25	1
				10 %.
$(1 - \alpha) / \alpha^2$	= 0,062			1

10

4.

$$-28,8 \times 10^{-19}$$

?

n=18.

Ar, HCl, H₂S, PH₃, SiH₄, F₂, HOF, CH₃F, CH₃OH, CH₃NH₂, H₂O₂, N₂H₄, NH₂OH, NH₂F

0,25

3

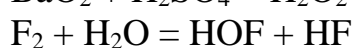
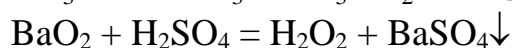
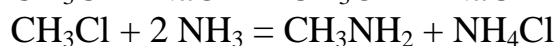
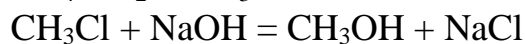
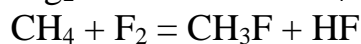
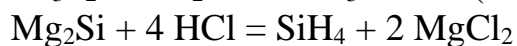
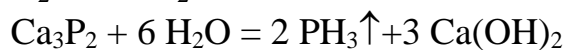
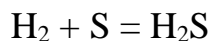
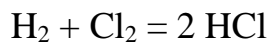
: Ar, HCl, H₂S, SiH₄, F₂, CH₃F, CH₃NH₂, NH₂F

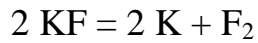
: HOF, CH₃OH, H₂O₂, N₂H₄

: NH₂OH

0,1

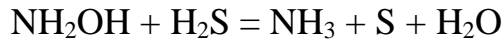
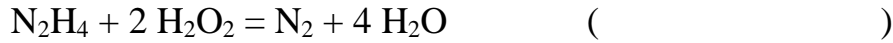
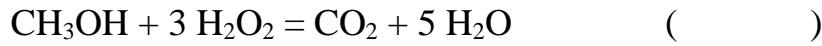
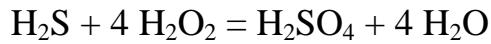
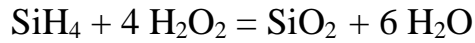
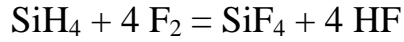
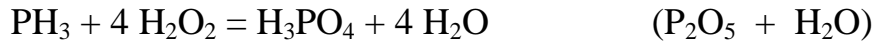
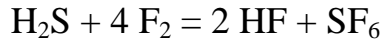
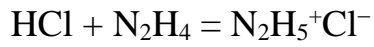
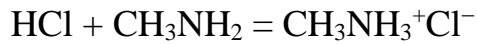
1





0,3

3



0,3

3

10

5.

β^-

12,25

${}^6\text{Li} \quad {}^3\text{H}$

5,6

4,5

0⁰

24,5

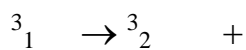
?

?

20

2

${}^6\text{Li} \quad \text{c}$



$1/2 = 12,25$

1



1

$$m=4,5 \text{ g. } n=0,5 \text{ mol}$$

$$=101300 \cdot \frac{=273}{0,25} \cdot V=0,0056 \text{ }^3$$

1

$$12,25$$

1

$$24,5$$

$$75\%$$

$$0,5 \times 0,75 = 0,375$$

3

1

$$= 0,375 \times 8,314 \times 273 / 0,0056 = 151990$$

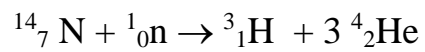
1

$$0,5$$

$$= 202 \text{ } 600$$

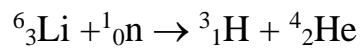
1

:



2

:



1

10

.2.

1.

» (1), (2) «

100 1, 2,

0,58 . =1,65

1, =1,72 2.

10,0 10,0 =0.1 / .

1 2

2

, (1% KMnO₄)

1

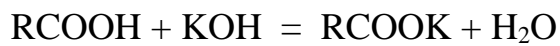
()

1,695%.

2

1, 2.

1.



C₁=0,1 / .

0,58 .

$$n = 0,1 \times 0,1 = 0,01$$

$$V_1 = C_2 V_2$$

$$= 58 /$$

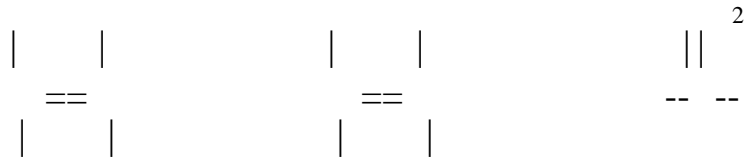
.0,5

2.

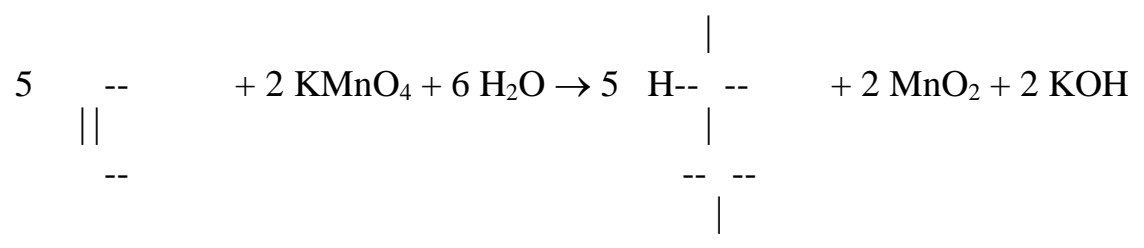
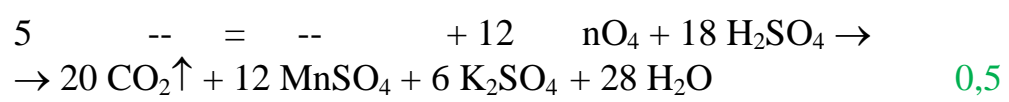
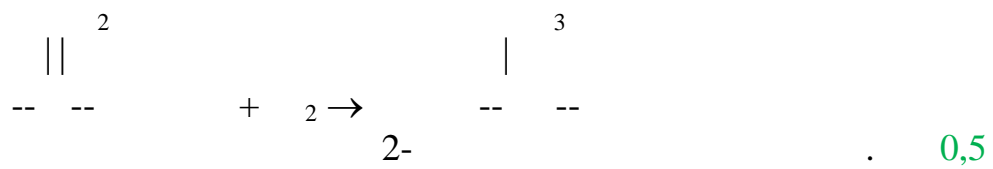
$$= 116 /$$

.0,5

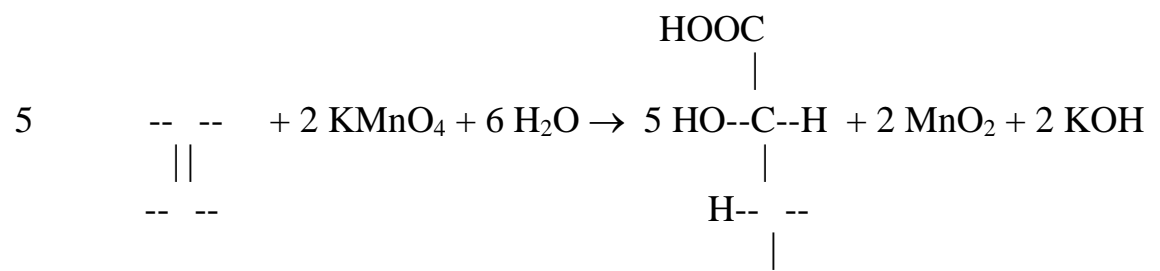
(), 2-



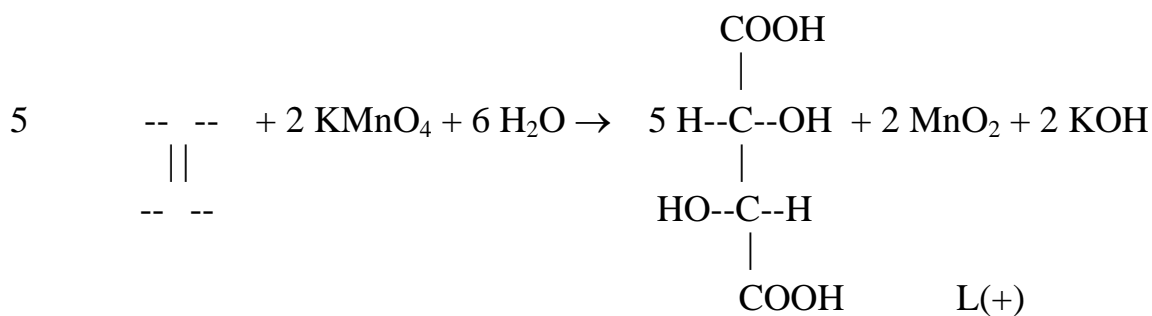
2- - 1



2,3- (-) 0,5



D(-)

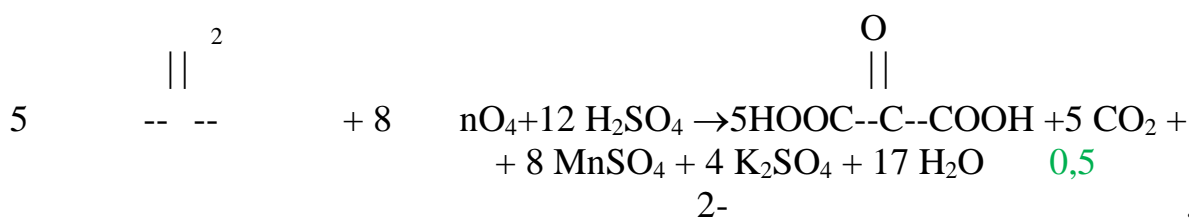


L(+)

1

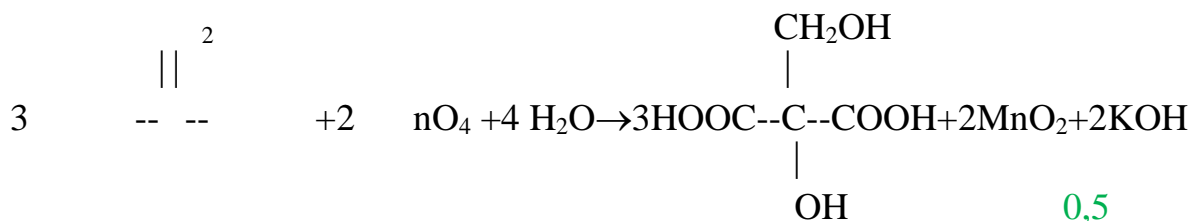
(2) - - , .

(1) 2-

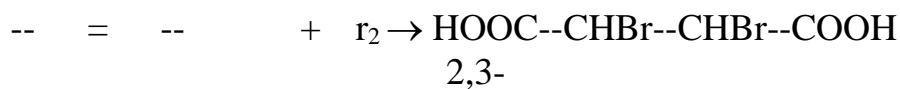


0,5

2-

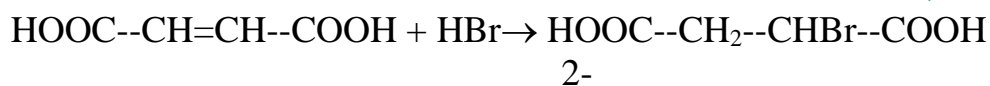


0,5



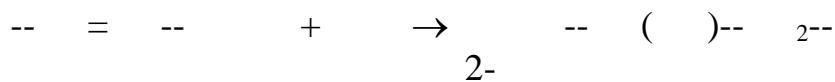
2,3-

0,5



2-

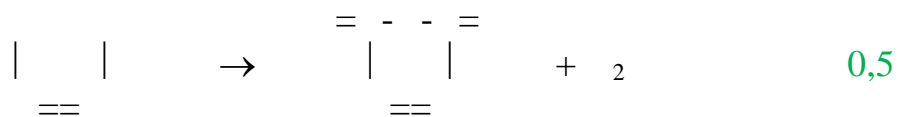
0,5



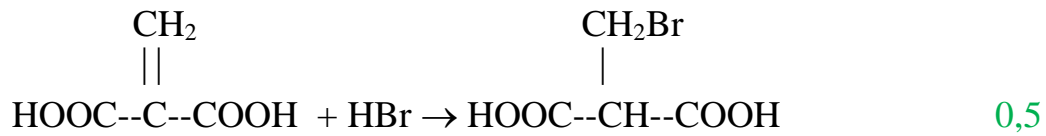
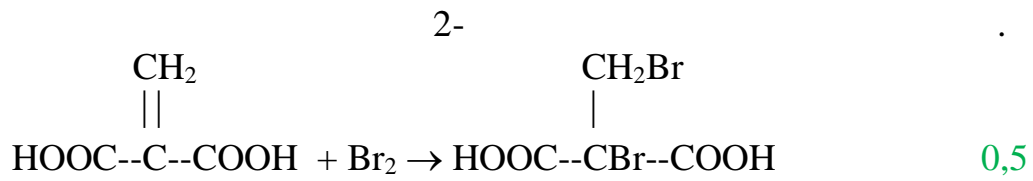
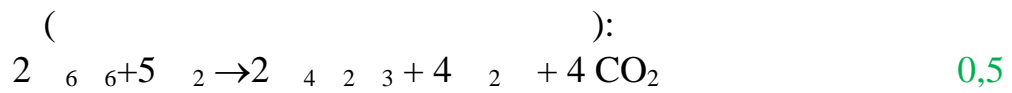
2-

0,5

:



0,5



10

2.

1894

1,875 / .

40

14.

homo sapiens.

13.

42,42 %.

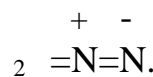
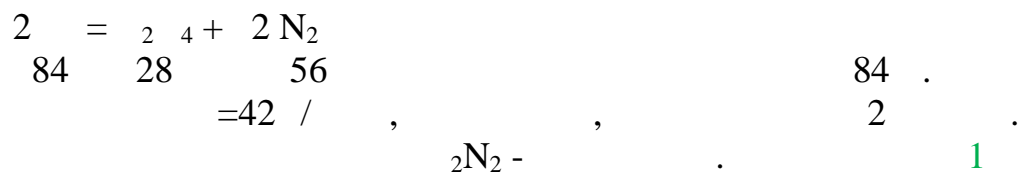
?

?

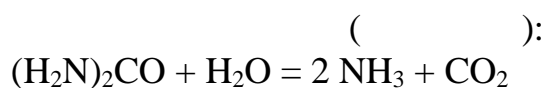
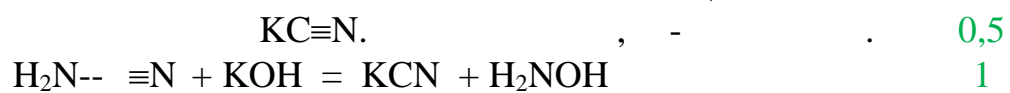
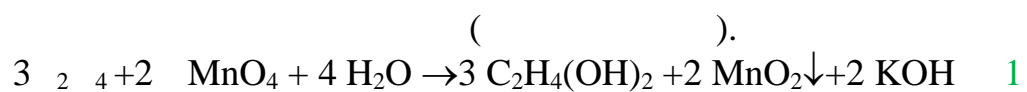
$$=1,875 \times 22,4 = 42 /$$

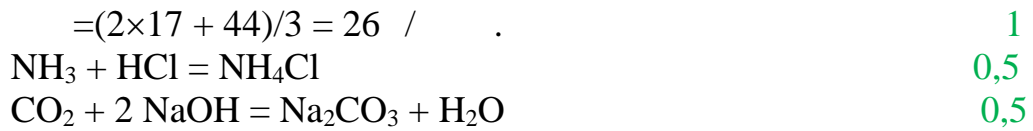
$$= 28 / \quad 1$$

$$28 / \quad N_2. \quad : = 1:2. \quad 1$$



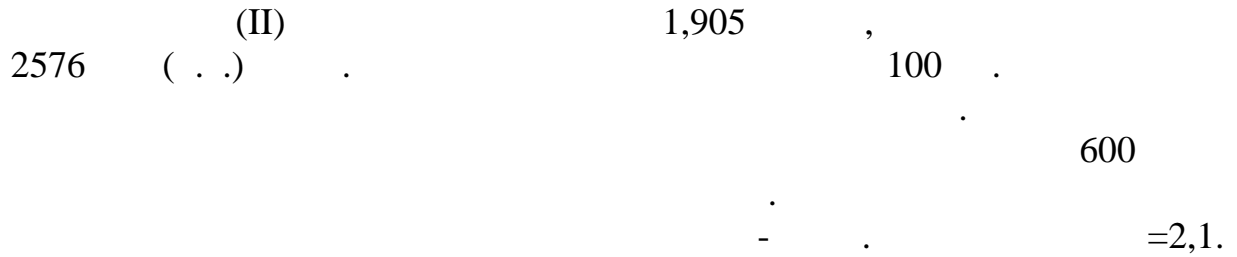
2 ∴, 1



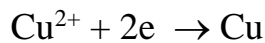
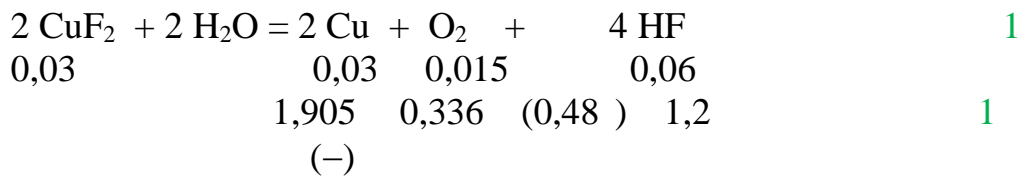


10

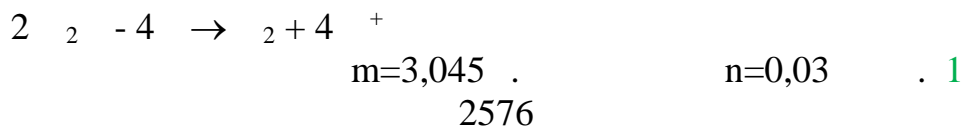
3.



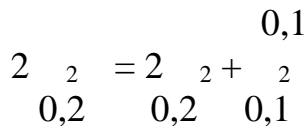
0,1, 0,01, 0,001 / .
10 %?



(+)



2576-336= 2240



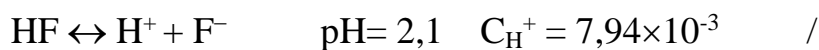
0,2

3,6 . 1

$$m=100,0 - 1,905 - 0,48 - 3,6 = 94,015$$

$$\omega(\text{F}) = 1,2 : 94,015 = 0,0128 = 1,28\% \quad 1$$

600 =0,1 / .



$$\alpha = 7,94 \times 10^{-3} / 0,1 = 7,94 \times 10^{-2} \quad 1$$

$$= \alpha^2 / (1 - \alpha); = 0,1 \times (7,94 \times 10^{-2})^2 / (1 - 0,0794) = 6,85 \times 10^{-4} \quad / \quad 1$$

/	α	+	/	
0,1	0,0794	0,00794	2,1	
0,01	0,260	0,00260	2,58	1
0,001	0,556	0,000556	3,25	1
				10 %.
$= (1 - \alpha) / \alpha^2$	= 0,062	/		1

10

4.

%, () 78,1 21,0 0,9

?

n=14, 16, 18.

18

HCl, H₂S, PH₃, SiH₄, F₂, HOF, CH₃F, CH₃OH, CH₃NH₂,
H₂O₂, N₂H₄, NH₂OH, NH₂F, 2 6.

0,25

3

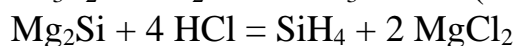
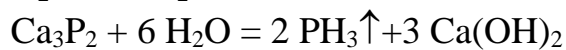
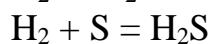
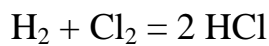
: HCl, H₂S, SiH₄, F₂, CH₃F, CH₃NH₂, NH₂F, 2 6.

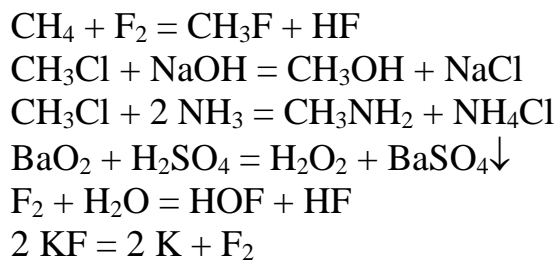
: HOF, CH₃OH, H₂O₂, N₂H₄

: NH₂OH

0,1

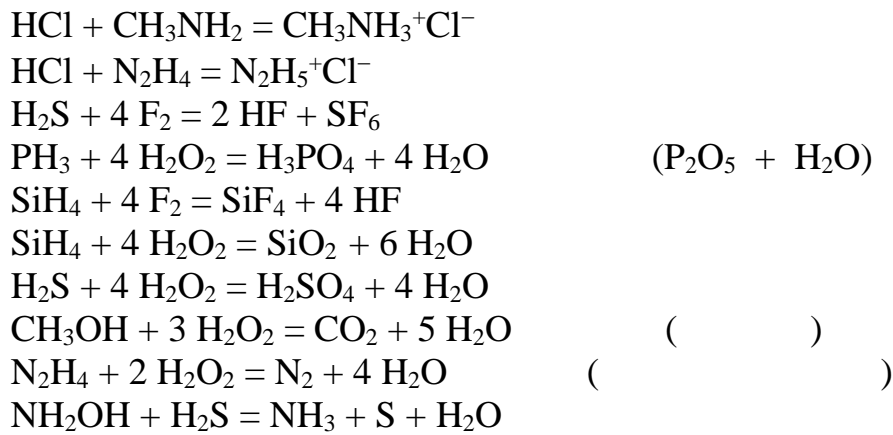
1





0,3

3



0,3

3

10

5.

β- 12,25

20

2

⁶Li c

2,8

2,2

0⁰

24,5

?

?

?

$${}^3_1\text{H} \rightarrow {}^3_2\text{He} + \frac{1}{2} = 12,25 \quad 1$$

$${}^2_2\text{He} \rightarrow {}^4_2\text{He} + \frac{1}{2} = 12,25 \quad 1$$

$$m = 2,2 \quad n = 0,1 \text{ mol} \\ = 101300 \quad = 273 \quad V = 0,0028 \text{ m}^3 \\ 0,125 \quad 0,05$$

$$12,25 \quad 1$$

$$24,5 \quad 75\%$$

$$0,1 \times 0,75 \times 2,5 = 0,1875 \quad 1$$

$$= 0,1875 \times 8,314 \times 273 / 0,0028 = 151990 \quad 1$$

$$0,2 \quad 0,05 \\ = 202 \ 654 \quad 1$$



$$) \quad (\quad 1$$