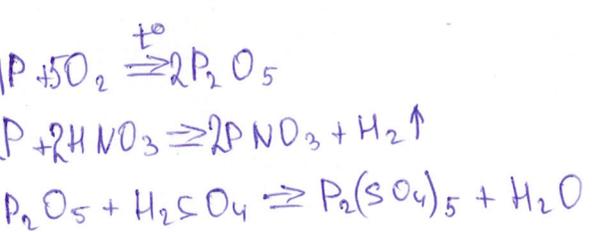
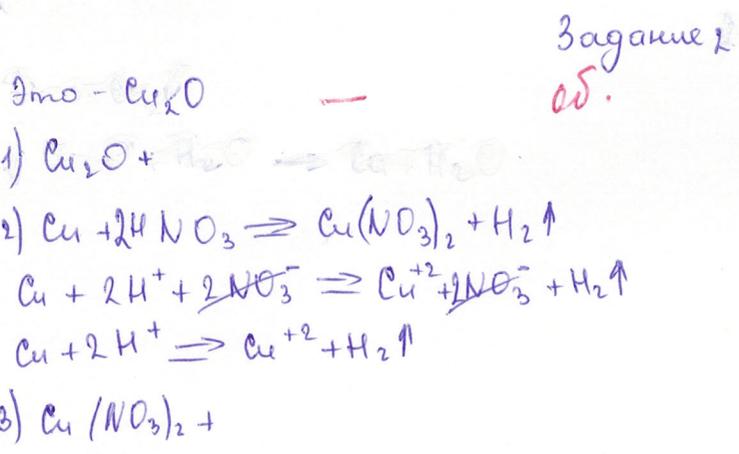
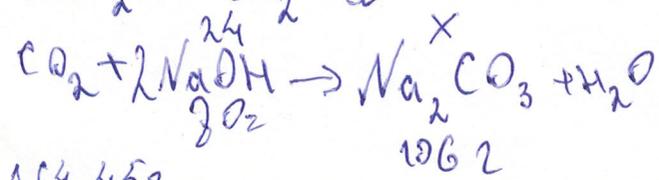
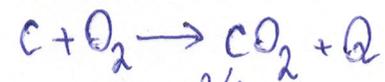


Хорош (9 класс)
Минкова Светлана
Ивановна



Задание 4.
- о.б. о.б. верно.

с/1 Биликов Дмитрий Вячеславович
9 кл.



$$164,452$$
$$14,6\%$$

$$1062$$

$$W = 164,45 \cdot 0,146 \approx 24$$

$$\mu(NaOH) = 23 + 16 + 1 = 40 \text{ г/моль}$$

$$n = 1$$

$$\mu(Na_2CO_3) = 46 + 12 + 48 = 106 \text{ г/моль}$$

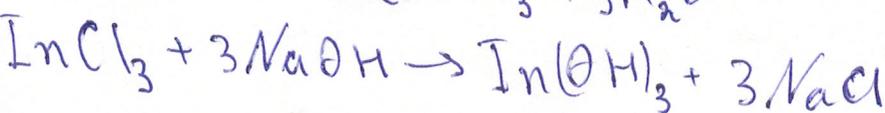
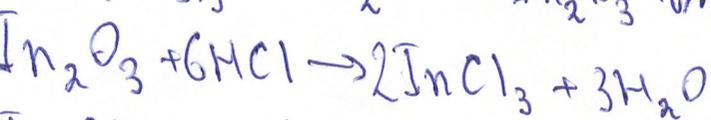
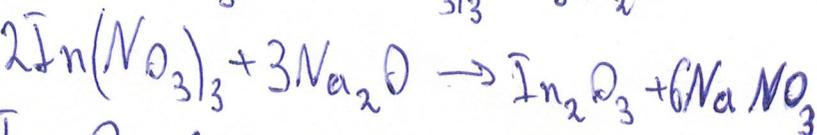
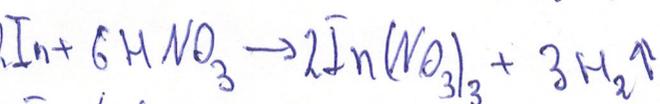
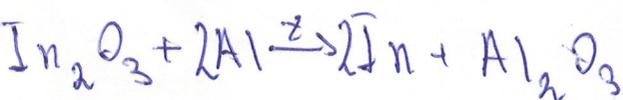
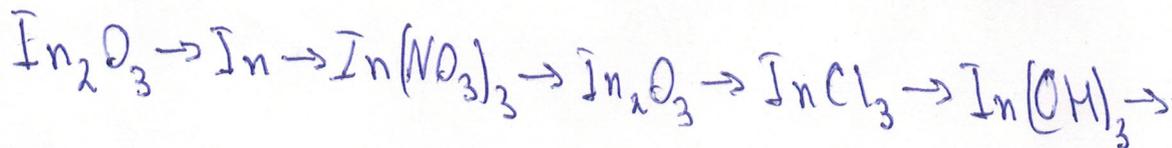
$$\frac{24}{80} = \frac{x}{106}$$

$$x = \frac{24 + 106}{80} = 1,625 \text{ г}$$

$$1,625 \cdot 0,02 = 0,0325 \text{ г}$$

10

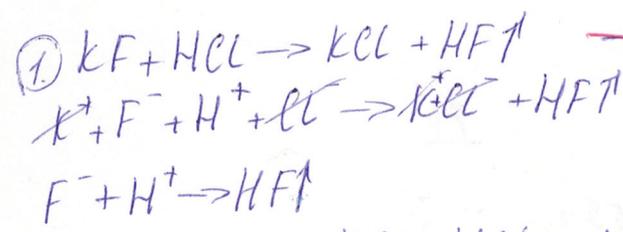
с/2



05.

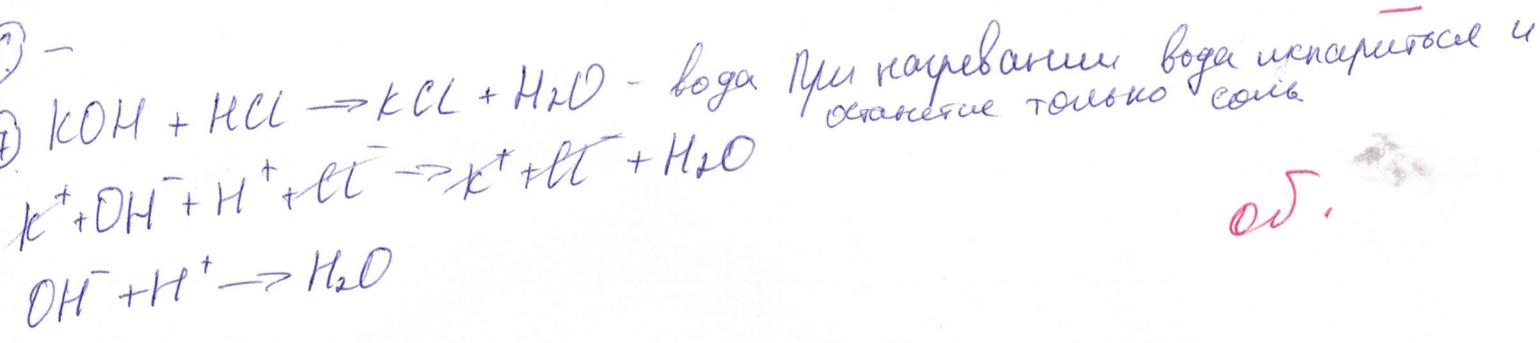
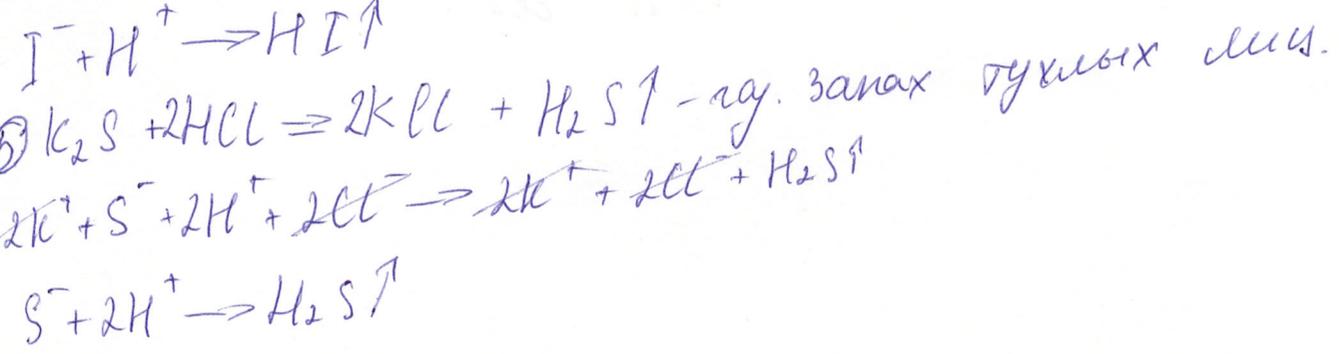
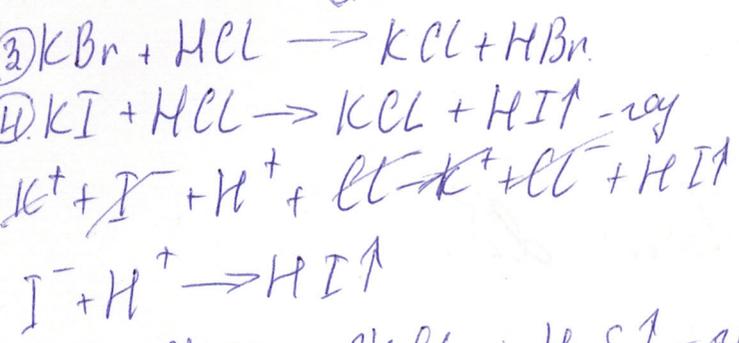
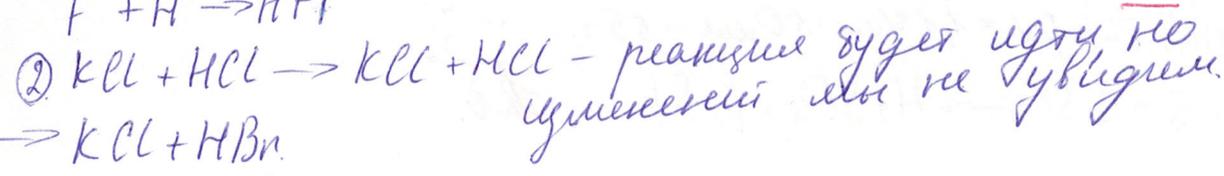
bevo 15

Задача 3.
 1. KF 5. K₂S
 2. KCl 6. -
 3. KBr 7. KOH
 4. KI



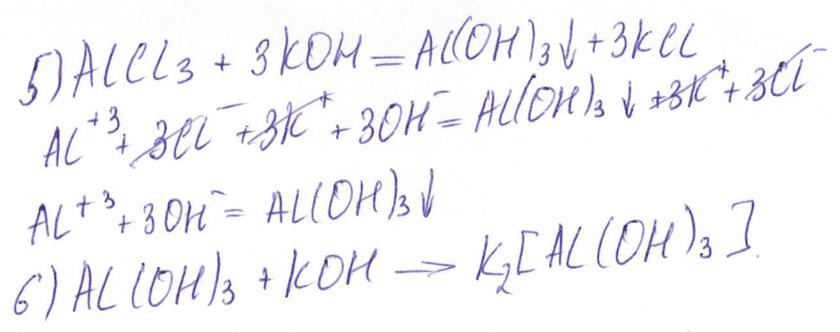
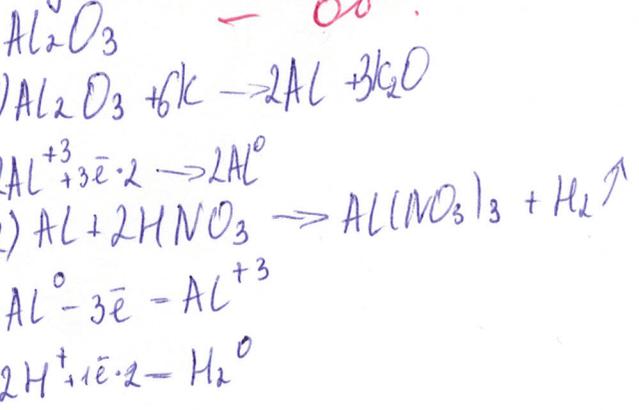
выделился газ

XO9O2 (9 класс)



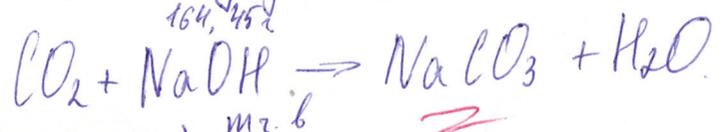
од.

Задача 2



Задача 1.

CO_2 - оксид углерода (IV) уменьшился газ.

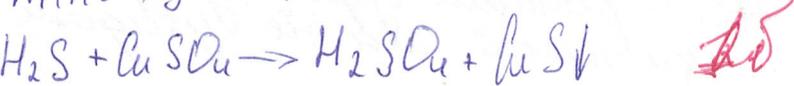


$w(NaOH) = \frac{m.r. b}{m. смеси} \cdot 100\%$
 $m.r. b. (NaOH) = \frac{w \cdot 100\%}{m. смеси}$
 $m.r. b. (NaOH) = \frac{14,6\% \cdot 100\%}{164,45} \approx 8,9г.$

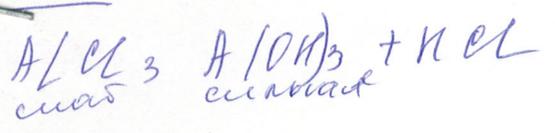
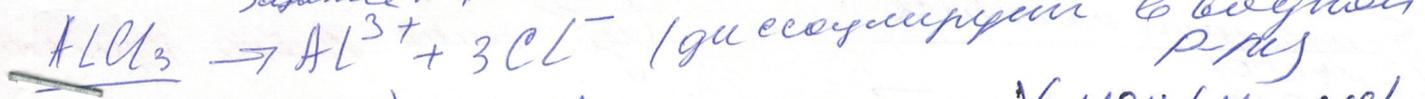
Задача 5.



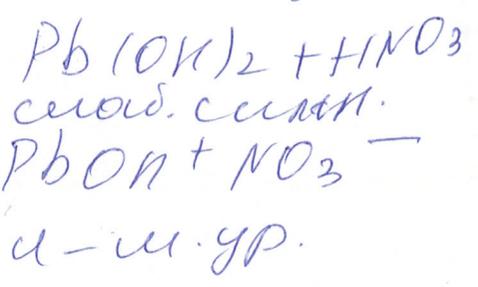
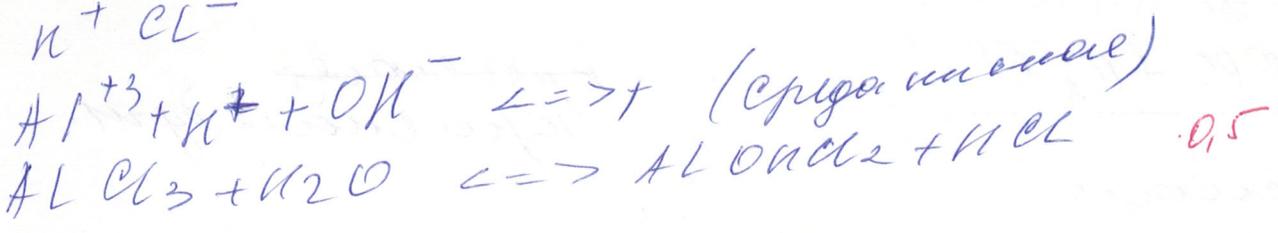
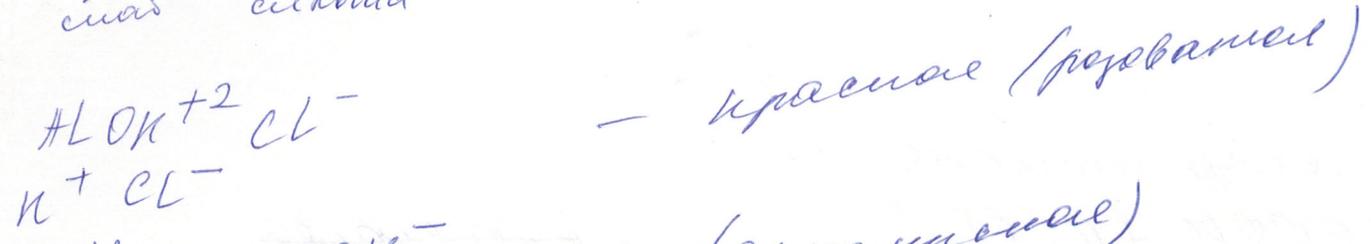
$$m(\text{HCl}) = \rho V = 1,1 \text{ г/см}^3 \cdot 50 \text{ см}^3 = 55 \text{ г}$$



всего 20.



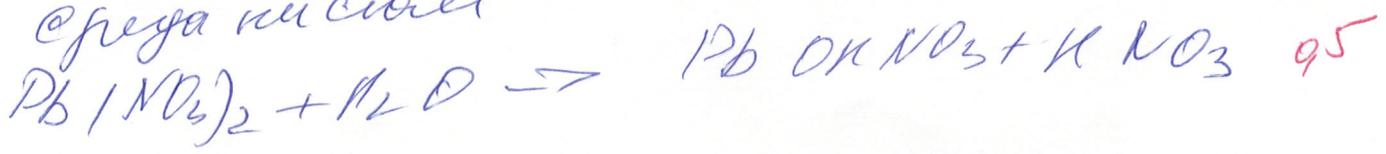
X 1104 (11 масс)



(красное переходит)



сред. кислая

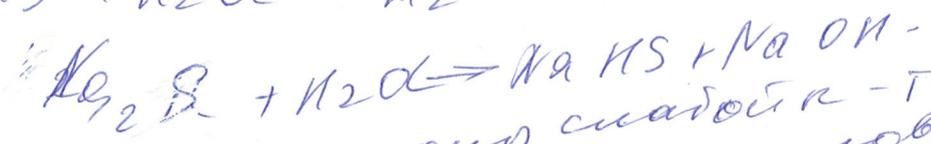


(мед. сер. вод. кислом)

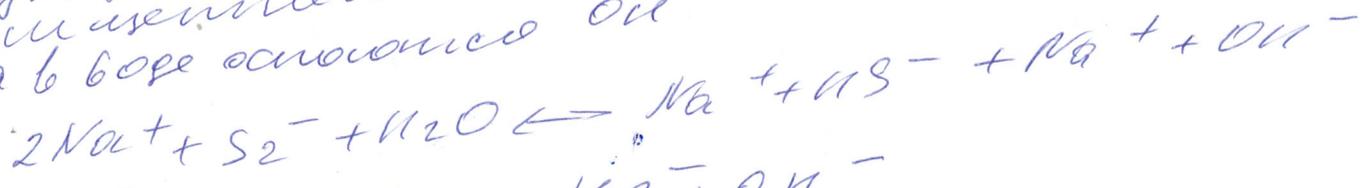
коруд.-силь



0.5



сильно-ионный слабый - то
 он ионизирует в воде ионизирует,
 а в воде основан OH



сред., слабый неомощь

бензолот петри
C₆H₅COOH
~~HCOOH~~ + H₂O →

Субботина Алёна Юрьевна

зел. кислота
HCOOH + H₂O

красное
красное дум.

кислота

Гл. булл.

нейтр.	кисл.	кислот
ж, зел.	от сини и красной	красн

всего 1,55.

Задача 1.

Морокуева Алена Владимировна

X 1003 (10 класс)

Дано:

$\text{NH}_3 + \text{CO}$ - смесь

\downarrow \downarrow
I г. II г.

I г. + CuO = m - 8,82

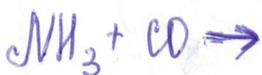
II г. - нейтрализована

m = 147 г

wf (...) = 10%

V (смеш) = ?

w (смеш) = ?



Решение:

0,5

Задача 2.

Дано:

p-ри:

$\text{Ca}(\text{CH}_3\text{COO})_2$

$\text{Pb}(\text{NO}_3)_2$

FeSO_4

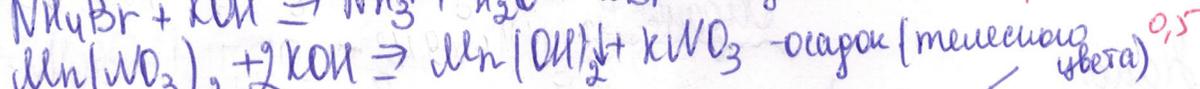
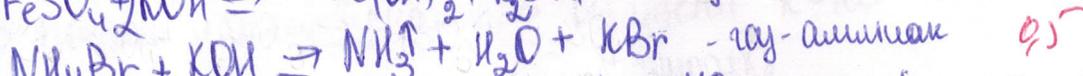
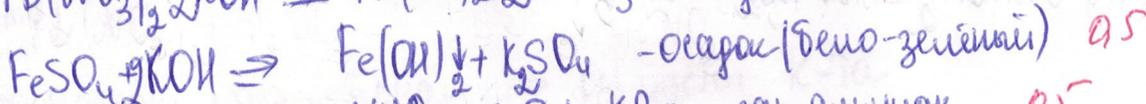
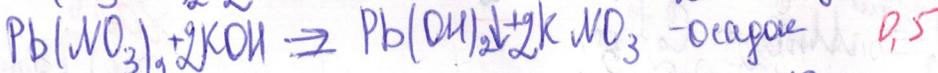
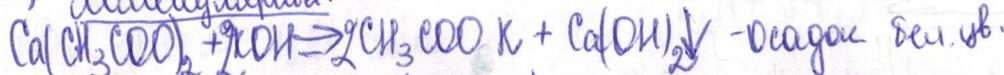
NH_4Br

$\text{Mn}(\text{NO}_3)_2$

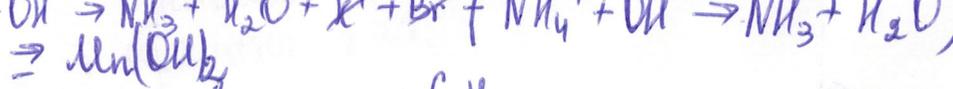
Найти содер-
жаемое.

Продукты реакции: 1) газ; 2) H_2O ; 3) осадок.

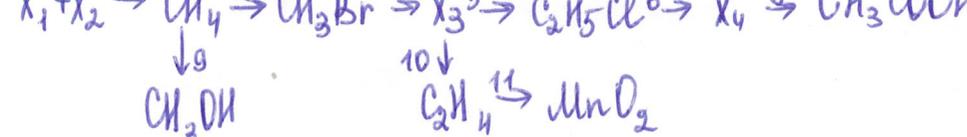
1) Добавим в пробирку KOH: +
маленький осадок



Ионы: $\text{Ca}^{2+} + 2\text{CH}_3\text{COO}^- + 2\text{K}^+ + 2\text{OH}^- \rightarrow 2\text{CH}_3\text{COO}^- + 2\text{K}^+ + \text{Ca}(\text{OH})_2 \downarrow$
 $(\text{Ca}^{2+} + 2\text{OH}^- \rightarrow \text{Ca}(\text{OH})_2 \downarrow)$



Задача 3. C_4H_6



30

- ① $x_1 + x_2 \rightarrow CH_4$, $x_1 - CH_3COOK$, $x_2 - KOH$
 $CH_3COOK + KOH \xrightarrow{t, kcal} CH_4 \uparrow + K_2CO_3$ (p-я Дромма) 1
- ② $2CH_4 \xrightarrow{t, kcal} C_2H_2 + 3H_2 \uparrow$ 1
- ③ $CH_4 + Br_2 \xrightarrow{t, kcal} CH_3Br + HBr$ 1
- ④ $CH_3Br + y \xrightarrow{t, kcal} x$, $x - C_2H_6$
 $2CH_3Br + 2Na \xrightarrow{t, kcal} C_2H_6 + 2NaBr \Rightarrow x_3 - C_2H_6$ 1
- ⑤ $C_2H_6 + Cl_2 \xrightarrow{t, kcal} C_2H_5Cl + HCl$ 1
- ⑥ $2C_2H_5Cl + 2Na \xrightarrow{t, kcal} C_4H_{10} + 2NaCl$ 1
 $x_4 - C_4H_{10}$
- ⑦ $C_4H_{10} \xrightarrow{t, kcal} C_4H_6 + 2H_2 \uparrow$ 1
- ⑧ $2C_4H_{10} + 5O_2 \xrightarrow{t, kcal} 4CH_3COOH + 2H_2O$ 1
- ⑨ $2CH_4 + O_2 \xrightarrow{t, kcal} 2C_2H_5OH$ 1
- ⑩ $C_2H_6 \xrightarrow{t, kcal} C_2H_4 + H_2 \uparrow$ 1
- ⑪ $C_2H_4 + Mn(OH)_2 \xrightarrow{t, kcal} MnO_2 + C_2H_6$ - 105.

Задача 4.

Дано:
 $m(Me(NO_3)_x) = 13,382$
 $V(HCl) = 117 \text{ мл} = 0,117 \text{ л}$
 $w(HCl) = 14\%$
 $\rho(HCl) = 1,072 \text{ г/мл}$

$Me(NO_3)_x = ?$

Решение: 125,192
 $Me(NO_3)_x + HCl \rightarrow MeCl + HNO_3$
 $m(MeCl) = \rho V = 107 \cdot 117 = 125,192 \text{ (0,12519 л)}$

05.

Задача 5.

Дано:

$$m(C_nH_{2n}) = 4,9142$$

$$V(Br_2) = 6 \text{ см}$$

$$p(Br_2) = 3,12 \text{ смм}$$

$$C_nH_{2n} = ?$$

$$4,9142 \quad 18,722$$



$$m(Br_2) = pV = 6 \cdot 3,12 = 18,722$$

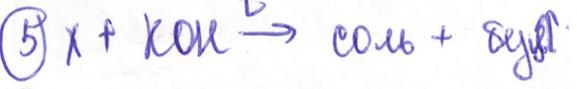
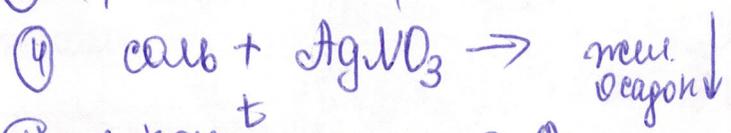
$$M(HBr) = 1 \cdot 1 + 80 \cdot 1 = 81$$

$$m = nM = 81 \cdot 1 = 81 \text{ г}$$

05.

Задача 6.

X - нецветное бесформенное в-во белая (желтая) увета, хранящаяся под слоем H₂O или в H₂S

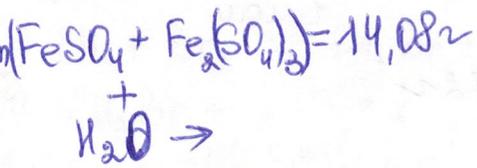


Бумажка (лакмусовая) краснеет, потому что в ходе реакции образуется к-та.

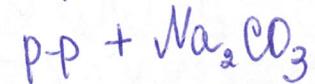
05

Задача 7.

Дано:



$$V(\text{р-ра}) = 50 \text{ мл}$$



$$M(\text{Na}_2\text{CO}_3) = 78,2 \text{ г/моль}$$

$$\omega(\text{Na}_2\text{CO}_3) = 12\%$$

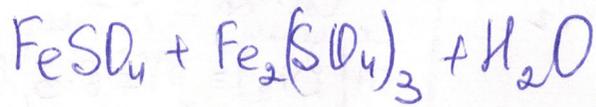
$$\rho(\text{Na}_2\text{CO}_3) = 1,132 \text{ г/мл}$$

Найти:
мол. концентр. солей.

и

$m(\text{осадка})$

Решение:



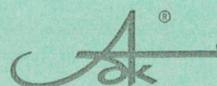
$$m(\text{Na}_2\text{CO}_3) = \frac{m}{\rho} = \frac{78,2}{1,13} \approx 69,22$$

$$\frac{12}{69,22} = \frac{100}{x}$$

$$x = \frac{100 \cdot 69,22}{12} = 576,83 \text{ г осадка}$$

ос.

осадок 135.



ТЕТРАДЬ

для Всероссийская олимпиада
школьников по химии

учени 2016-17 класса

II (муниципальной) этап
ШКОЛЫ

Огарковой Анны Сергеевны

№ задания	Формулы	Проценты
№2	7	
№3	9,5 + 1	
№5	6	

$$\frac{22,5}{61} = 38\%$$

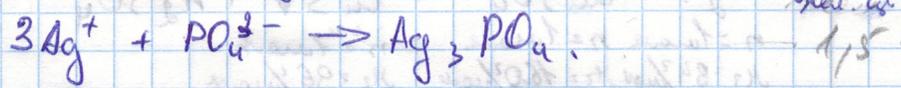
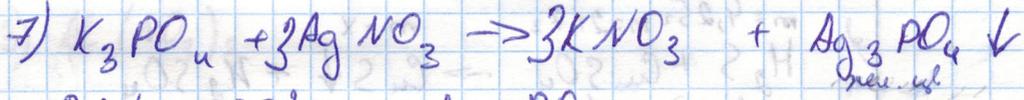
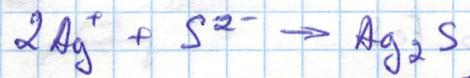
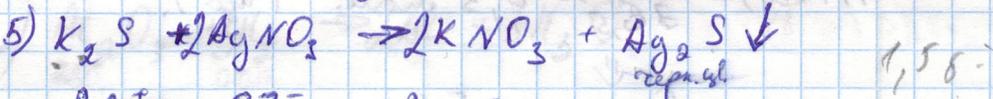
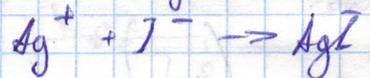
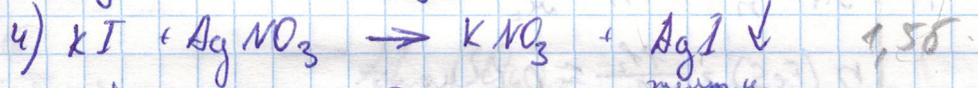
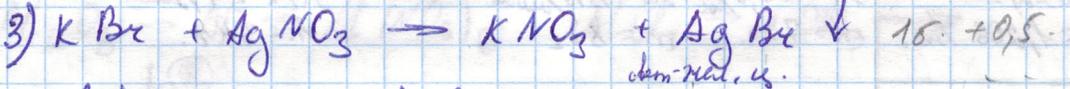
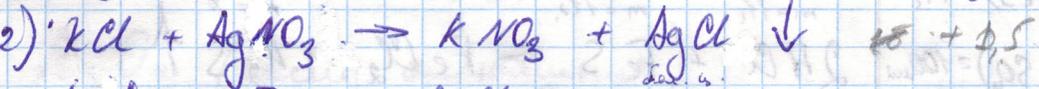
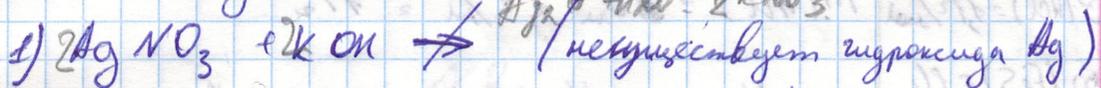
$$\frac{61}{22,5} = 100\%$$

$$x = \frac{22,5}{61} \cdot 100\% = 38\%$$

N3.

Dano: $K(OH)$, KCl , KBr , KI , K_2S , KF , K_3PO_4

Reaktyv: $AgNO_3$



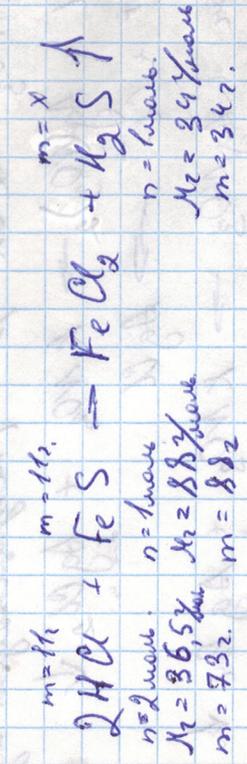
9,5 + 1

NS

Рассчитать

$$\rho = \frac{m}{V} \Rightarrow m = V \cdot \rho \quad V = 50 \text{ мл} \cdot 0,2 = 10 \text{ мл}$$

$$m(\text{HCl}) = \rho_{\text{HCl}} \cdot V = 1,17 \text{ г/мл} \cdot 10 \text{ мл} = 11,7 \text{ г}$$



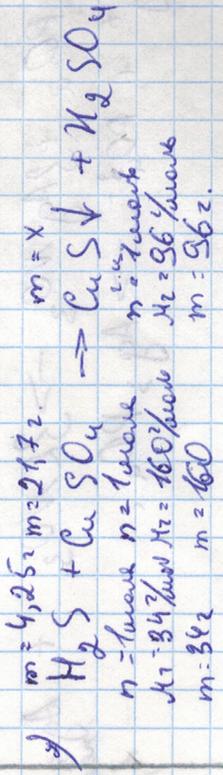
$$M_1 = \frac{m}{n} \Rightarrow n = \frac{m}{M_1}$$

$$n(\text{FeS}) = \frac{11,7}{88} \approx 0,13 \text{ моля}$$

$$n(\text{HCl}) = \frac{11,7}{36,5} \approx 0,3 \text{ моля} \quad (\text{изб.})$$

расчитать по FeS

$$m(\text{H}_2\text{S}) = \frac{M_2 \cdot n}{1000} = \frac{34 \cdot 0,13}{1000} \approx 4,25 \text{ г}$$



$$m(\text{CuSO}_4) = 100 \text{ мл} \cdot 0,18 \cdot 1,206 \text{ г/мл} \approx 21,7 \text{ г}$$

$$n(\text{CuSO}_4) = \frac{21,7}{160} \approx 0,14 \text{ моля}$$

$$n(\text{H}_2\text{S}) = \frac{4,25}{34} \approx 0,13 \text{ моля}$$

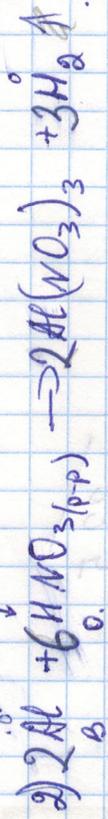
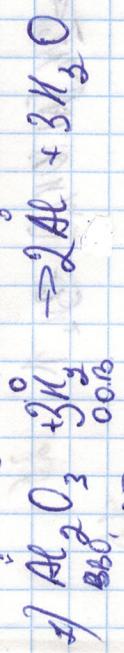
расчитать по H_2S

$$m(\text{CuS}) = \frac{4,25 \cdot 96}{34} = 12,2 \text{ г}$$

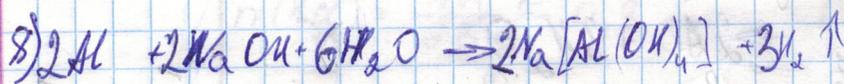
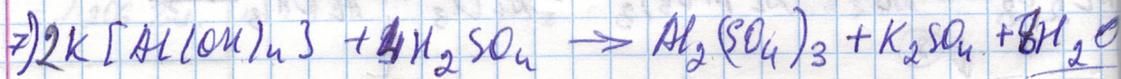
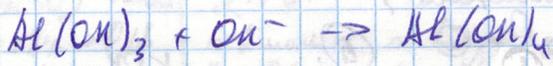
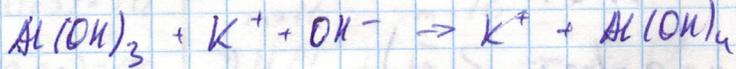
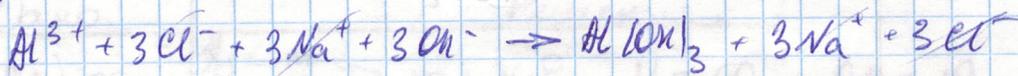
$$\text{Ответ: } m(\text{CuS}) = 12,2 \text{ г}$$

NS

Al_2O_3 (окислитель)



NS



23,5