

№1.

Берілгені:

$$m(\text{Me}(\text{II}); \text{KCl}) = 27 \text{ г}$$

$$V(\text{H}_2) = 4,81 \text{ л}$$

$$\eta = 20\%$$

$$m_2 = 13 \text{ г} - \text{азаядн.}$$

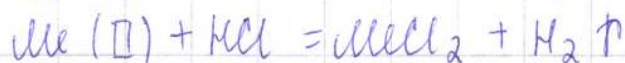
$$m_3 = 19,20 \text{ г} - \text{алтын.}$$

n = ?

Шешуі:

Me(II) және KCl қоспасы

$$\text{K} \quad \quad \quad 4,81$$

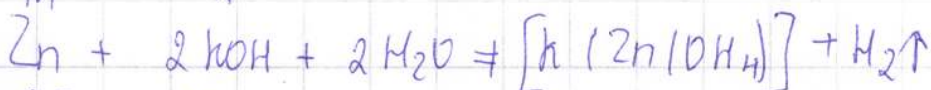
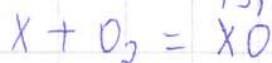


$$x \quad \quad \quad 22,4$$

$$m(\text{қоспа}) = 27 - 13 \text{ г} = 14 \text{ г}$$

$$14 - 4,81$$

$$x - 22,4 \quad x = 65,19 \text{ г}$$



$$14 - x$$

$$x = \frac{14 \cdot 112}{65} = 24,17 \text{ г}$$

$$65 - 112$$

$$100 - x$$

$$x = 96,48 \text{ г}$$

$$25 - 24,12$$

$$V = \frac{96,48 \text{ г}}{1,185 \text{ г/мл}} = 81,41 \text{ мл}$$

№3

Берілгені:

$$m(A) = 0,291 \text{ г}$$

$$V(50) \text{ мл}$$

$$V(\text{HCl}) = 50 \text{ мл}$$

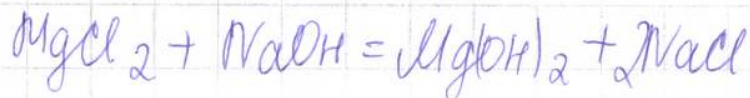
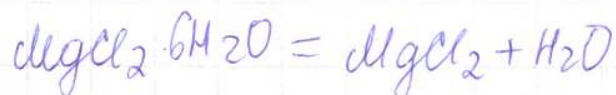
$$m(\text{HCl}) = 0,1 \text{ м} = 0,1 \text{ г/мл}$$

$$V_2 = 100 \text{ мл}$$

$$m(B) = 0,632 \text{ г}$$

Шешуі:

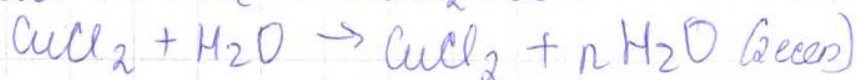
$\text{MgCl}_2 \cdot \text{H}_2\text{O}$ - мажнн кедір
гексагидрат.



$$\omega(\text{Cl}_2) = ?$$

$$\text{формула (A)} = ?$$

жүмбақ есер: $\text{CuO} + \text{C} + \text{Cl}_2 \rightarrow \text{CuCl}_2 + \text{CO}$



№4

Берілгені:

$$M(X) = 3,13 \text{ г/л}$$

Шешуі:

$$(X + n)$$

$$M(X) = 3,13 \text{ г/л} \cdot 22,4 \text{ л} = 70 \text{ г/мол}$$

$\text{C}_n \text{H}_{2n}$ - оны цимолентан деп

реакция: ала алашоз.



X - зат - цимолентан.

Шешуі:

1) А уосиласа фариттуу артоу
мошериінен арашасот жасолотуу
том Б атмас уондоролерот



1) m/k формула(X) = ?

2) ρ / $M(X) \cdot \rho = ?$

3) X, A, B, C = ?

№5

Берілгені:

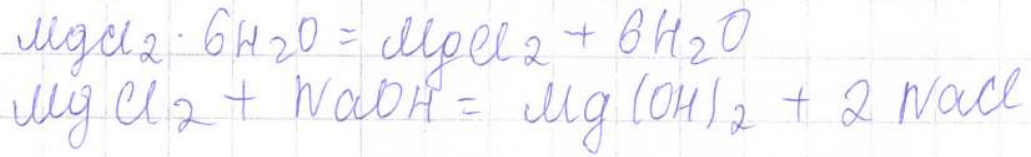
$$\omega(X) = 20,2\%$$

$$m(B) = 5 \text{ г}$$

$$m \text{ бөл. ш } (B \text{ н } \text{H}_2\text{O}) = 9,04 \text{ г}$$

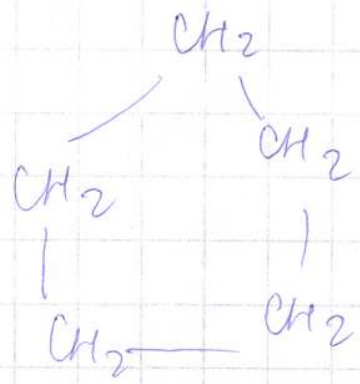
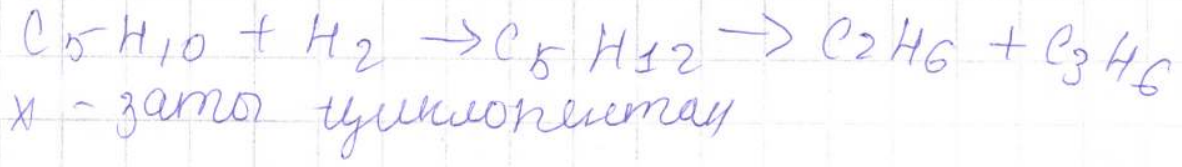
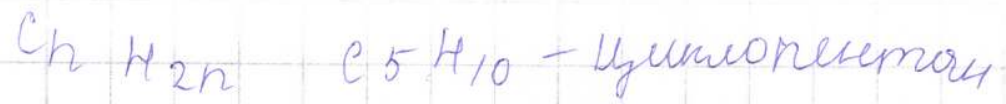
формулаын алаотуу

№3

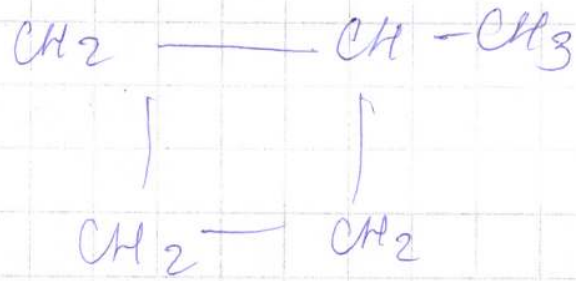


№4

$$M(x) = 3,13 \text{ г/л} \cdot 22 \text{ л/моль} = 70 \text{ г/моль}$$

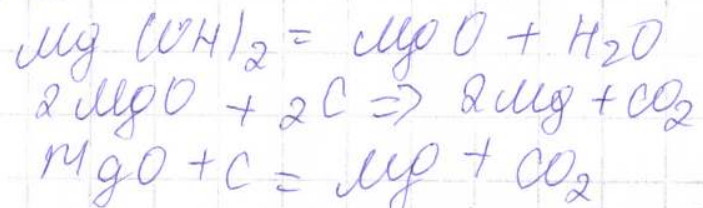


циклопентан



2-метилциклобутан

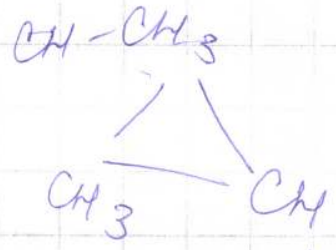
№3 есеп



A - заттар мағынасы.

$C_3 H_6$ - пропан

$C_2 H_6$ - этан.



2,2-диметилпропан

1) Перімені шешуі

$$\begin{array}{l}
 m - 272 \\
 O_2 - 4,81 \text{ л} \\
 20 - 70 \text{ ақпарат} \\
 \text{сұл} - 1,185 \text{ г/мл}
 \end{array}$$

$$\begin{array}{r}
 27 \cdot \frac{100}{25} \% = 108 \\
 108 \text{ л} + 4,81 = 112,81 \\
 112,81 \\
 \underline{1,185} \quad -111,625
 \end{array}$$

$$25 \% \quad K + O_2 = K(O_2)$$

2) А - В

$$B - x - 20,2 \%$$

$$B = 52$$

$$B \cdot K \cdot H_2O = 5042$$

$$O_2 = 16 \cdot 2 = 32 \cdot \frac{100}{20,2 \%}$$

$$3) \begin{array}{ccc} 3,1 & 3,2 & 3,3 \\ 4 & 11 & 7 \end{array} \quad \begin{array}{l} \text{24 ақпарат} \\ 22 \end{array}$$

$$\text{MgCl}_2 \cdot 6H_2O$$

$$24 \cdot 70 = 24 \cdot \frac{100}{10} \cdot \frac{20}{10} = 24 \cdot \frac{5}{4}$$

$$1) Cl = 10 \cdot \frac{100}{35} = 10 \cdot \frac{20}{7} = \frac{200}{7} = 28,571$$

$$\frac{120}{4} = 30$$

$$2) Na - 12 \text{ мл} \quad 0,05 \text{ мл}$$

$$3) \begin{array}{ccc} Cl(O)_2 = 13,7 \text{ мл} & 0,01 \text{ мл} & K \text{ ақпарат} \\ 12 \text{ мл} & 0,05 \text{ мл} & \\ \hline 15,7 \text{ мл} & 0,06 \text{ мл} & \end{array}$$

$$15,7 \cdot \frac{100}{0,06} = \frac{314}{3} = 104 \frac{2}{3}$$

4) $CO_2 = 3,13 \text{ мл}$ ге сұя ерітінді тұрсіздігіне
 $K + H_2O \neq$ және тұзінегі

$$+ H_2 = A + B$$

$$Li \quad 6,94^3$$

$$x CO_2 = K + H_2O \neq$$

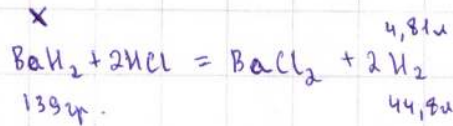
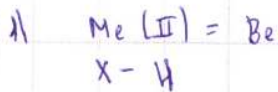
$$c, B$$

$$c + B$$

сұямен тотусу-
ғанағы.

$$2) K \quad 19 \quad c \quad \frac{14}{2}$$

$$3) Li \quad 6,94 \quad Na$$

$n=1.$


$$n = 27 - 14 = 13.$$

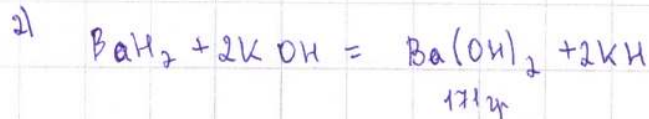
$$m(\text{BaH}_2) = 27\text{г}$$

$$V(\text{H}_2) = 4,81x$$

$$X = \frac{139\text{г} \cdot 4,81x}{44,8x} \approx 14\text{г} \quad (\text{реакциядан кейін } 13 \text{ г-ға азайды})$$

$$V(\text{BaH}_2) = 1 \text{ моль.}$$

2)

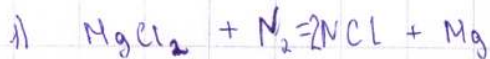


$$171\text{г} = 100\%$$

$$x = 25\%$$

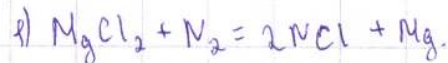
$$X = \frac{171\text{г} \cdot 25\%}{100\%} \approx 42\text{г}.$$

Маусым: зәңгір мәншер 42 г.

 $r=3.$


$$\omega(\text{Cl}) = \frac{35,5x}{0,297x} \cdot 100\% = 0,8\%$$

2) А заттың формуласы: NCl.

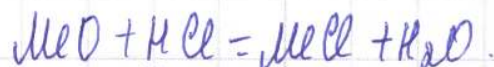


Әберілені:

$$m_1(\text{MeO}) = 27\text{г.}$$

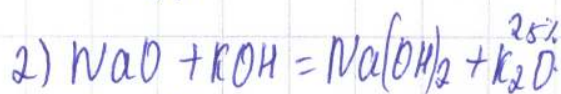
$$m_2(\text{HCl}) = 4,81\text{г.}$$

$\omega = ?$



$$1) \omega = \frac{m_{\text{теория}}}{m_{\text{практика}}} \cdot 100\%$$

$$\omega = \frac{27}{4,81} \cdot 100\% = \cancel{56} \cdot 6,5\%$$



$$\rho = 1,85\text{ г/мл.}$$

$$39 - 25x$$

$$1,85 - x$$

$$x = \frac{1,85 \cdot 25x}{39} = 3,5$$

N: 2 есеп.

$$1) \omega = 20,2\%$$

$$B = 5\text{г.}$$

$$1,81 - 100x$$

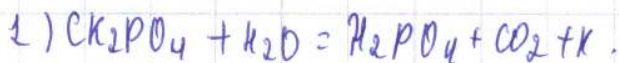
$$x - 20,2x$$

$$x = \frac{1,81 \cdot 20,2\%}{100\%} = 36,52\text{ (г)}$$



N: 4 есеп.

$$\rho = 3,137\text{ г/мл.}$$



$$V_m = 22,4\text{ л/моль.}$$

$$x = \frac{3,13 \cdot 22,4\text{ л/моль}}{185} = 2,60$$

$$2) x + A + B = C. \quad A + B = C$$

$$3) M_r(\text{K}_2\text{PO}_4) = 12 + 39 \cdot 2 + 31 + 16 \cdot 4 = 185$$

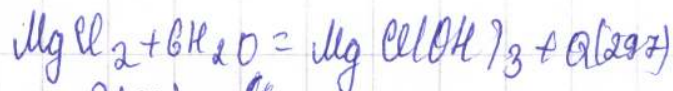
X - Ол көміртек (C)

K - Ол калий (K)

B - сутегі (H₂O)

C) - шығуына қоспа.

N: 3 есеп.



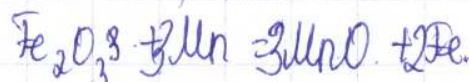
$$1) \omega(\text{Cl}) = \frac{6}{12} = 2$$

$$\text{NaOH} = 12,0\text{ мл } 10\% \text{ р-н.}$$

Қалған - 50 мл.



$$2) m(\text{HCl}) = 10\text{г.}$$



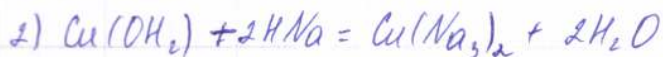
$$\omega = 5$$

$$3) \omega(\text{Fe}) = \frac{26}{56} = 0,23$$

Задача 3

1) $m(\text{Cl}) - ?$

$$0,632г - 0,291г = 0,341г$$



3) $\text{Fe}(\text{HCl})$ 20мл - 13,7мл = 6,3мл

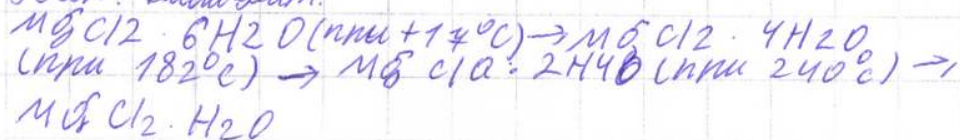
Задача 1

1) $m(\text{Me}(\text{IV})) - 24г$

$$24г - 13г = 14г + 17г = 33,20г$$

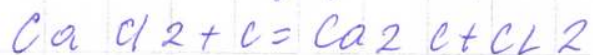
$$2) \frac{24г}{100\%} \cdot \frac{25\%}{19,20г} = \frac{24 \cdot 19,20}{4\%} = 129,6$$

3 есеп. Бишофит.

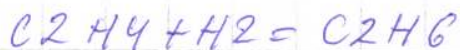


тамақ суызданбайды, гидраттағы қышқыл, HCl түзіледі.

2 есеп. Белгісіз заттар.



4 есеп. Белгісіз көрінетін зат.



№1.

1.1. $M: 4,81 \text{ г} \cdot 272 = 109,87$

$\frac{19,20 \text{ г}}{132} = 147,92$

$109,87 + 147,9 = 124,66$

$M: M = \omega = 124,66$ мольдік қиес

1.2. $M: v_{\text{ерм}} = \frac{m_{\text{срт}}}{\rho} = \frac{25\%}{1,185 \text{ г/см}^3} = \frac{25\% \cdot 100\%}{1,185} = \frac{4}{1,185} =$

4,740

№2. $A + \text{уасрит} \rightarrow \text{масап түсті тотықтарын B газ}$
 $\hookrightarrow B \text{ тұз} + \text{уия J газ}$

$A - \text{HCl қосылыс}$ $B - \text{HF (тұз)}$ $X -$

$B - \text{F}_2 \text{ газ}$ $J - \text{уия Cl}_2 \text{ газ}$ $(n) \text{ саны белгісіз?}$

$m = 20,2\%$



$B \cdot n \cdot \text{H}_2\text{O}$

$n = \text{HF} \cdot n \cdot \text{H}_2\text{O} \quad m(\text{F}) = 19$

$n = 19 \cdot 20,2\% \Rightarrow 39,28$

№4



$X - (\text{H}_2) \text{HCO}_2$

3) $X - \text{CO}_2$

$A - \text{HC}_2$

$B - \text{H}_2\text{O}$

$C - \text{C}$

№3 1) $\omega(A) = \frac{91}{50} = 0,50$

3) $\omega(\text{Fe}) = \frac{1,37 \cdot 0,01}{20} = \frac{0,0137}{20} \Rightarrow$

0,17

$\omega = \frac{m_i}{m_{\text{срт}}}$