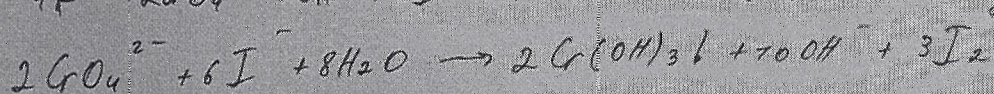
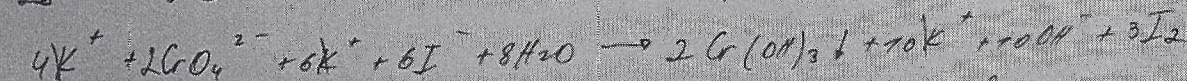
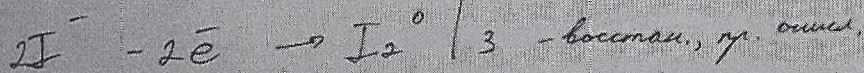
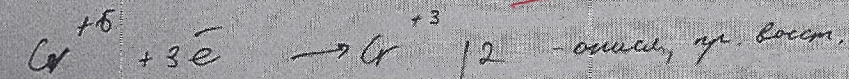


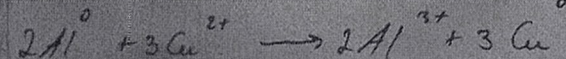
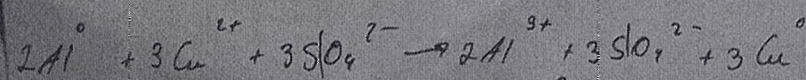
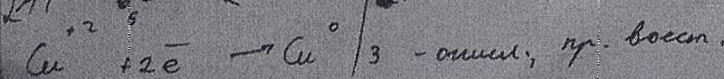
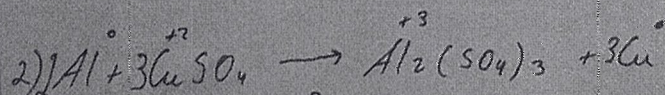
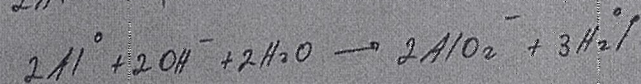
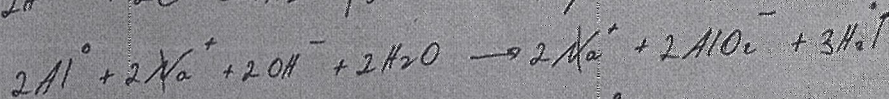
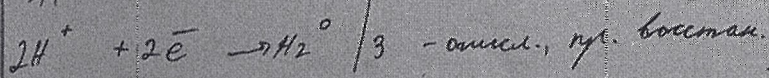
ВАРИАНТ № 2

Оценка выполнения олимпиадной работы (заполняется проверяющим)												
Первая проверка	№ задания	1	2	3	4	5	6	7	8	9	10	Σ
	Полученный балл	2	8	15	20	5	1					51
	Σ баллов прописью	пятьдесят один						Подпись проверяющего				
Вторая проверка	№ задания	1	2	3	4	5	6	7	8	9	10	Σ
	Полученный балл	2	8	15	20	5	1					51
	Σ баллов прописью	пятьдесят один						Подпись проверяющего				

Задача №1



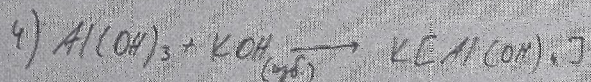
Задача №2



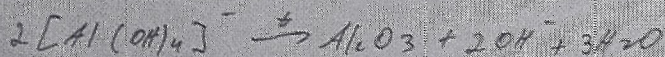
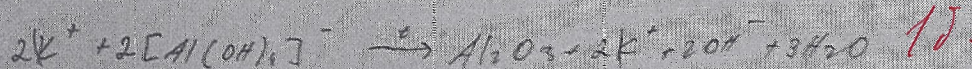
Вариант № 2



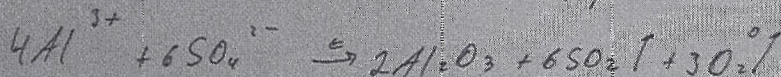
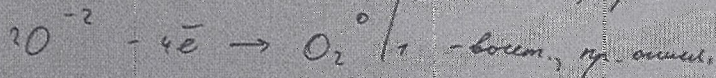
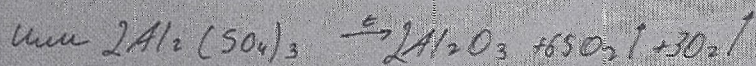
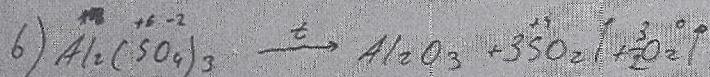
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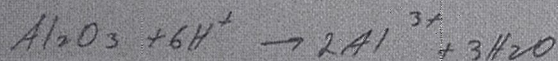
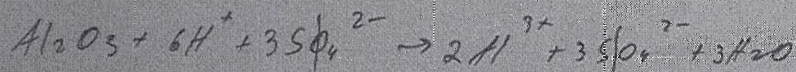
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25.



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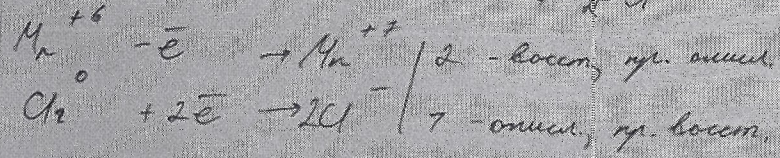
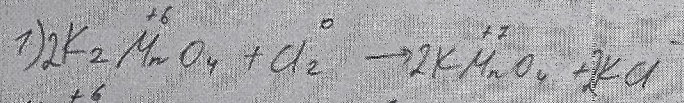
Вариант № 2

A - KMnO_4

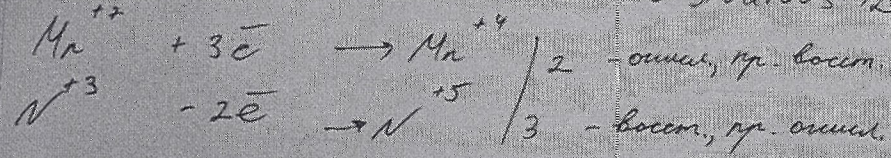
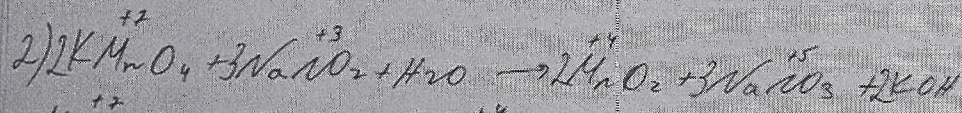
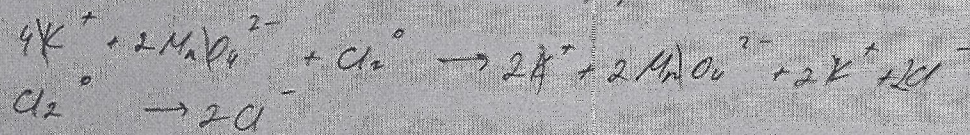
B - Cl_2

C - H_2SO_4

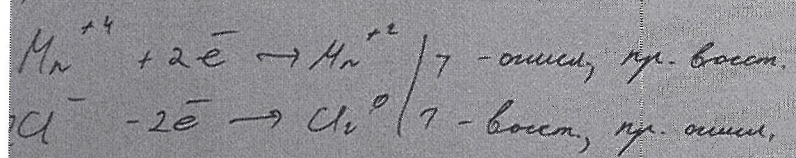
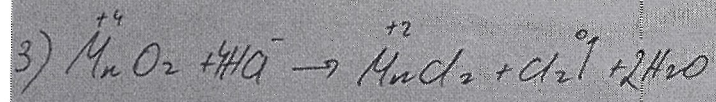
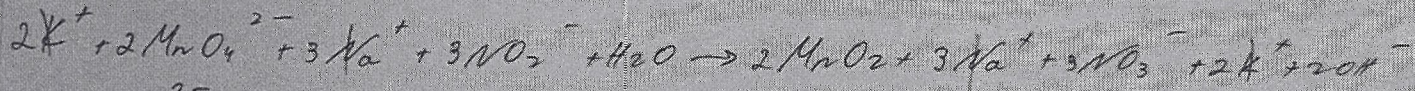
D - BaSO_4



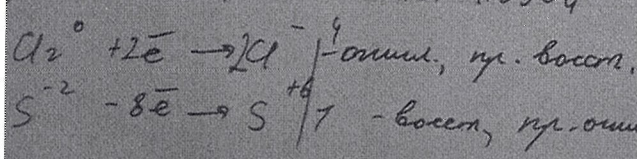
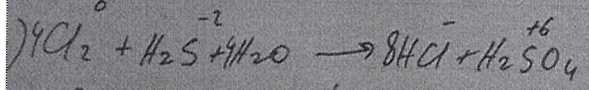
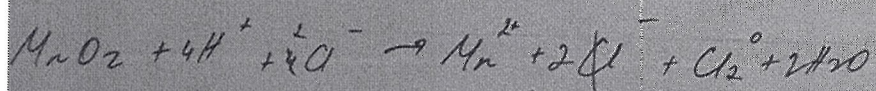
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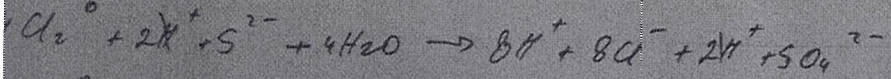
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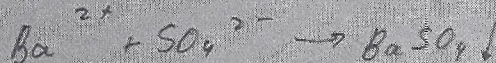
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35

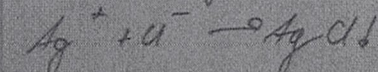
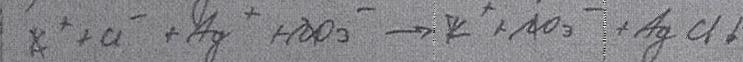
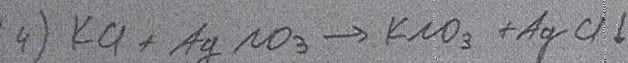
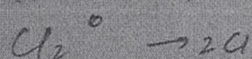
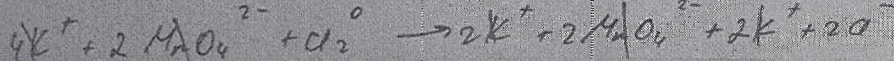
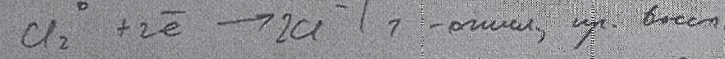
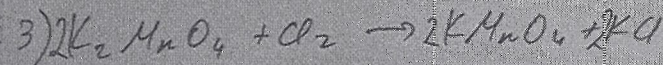
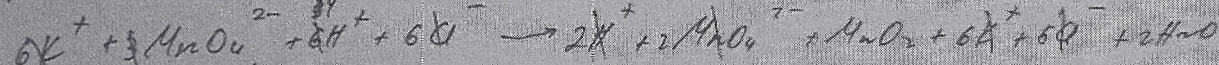
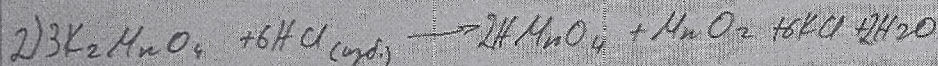
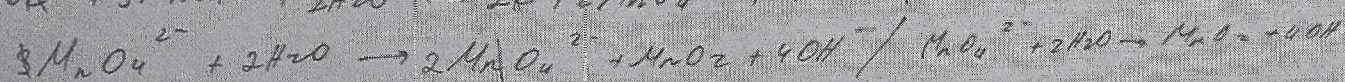
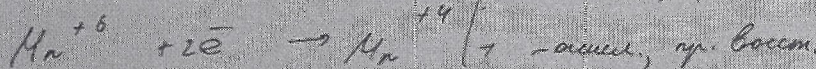
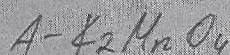


Вариант № 2



35.

Задача 4





Вариант № 2

по $V_{\text{ра}} A = 30000 \text{ см}^3$

масса $A = 30000 \cdot 1.2 = 36000 \text{ г}$

м.мст. $A = 36000 \cdot 0.02 = 2520 \text{ г}$

$n(\text{K}_2\text{MnO}_4) = \frac{2520}{197} = 12.8 \text{ моль}$

$n(\text{KA}) = n(\text{K}_2\text{MnO}_4) = 12.8 \text{ моль}$ (по У.Х.Р.)

~~по~~ $n(\text{KA}) = n(\text{AgCl}) = 12.8 \text{ моль}$ (по У.Х.Р.)

$m(\text{AgCl}) = 12.8 \cdot 143.5 = 1836.8 \text{ г}$

Ответ: $m(\text{AgCl}) = 1836.8 \text{ г}$

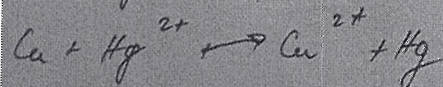
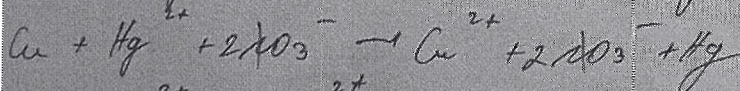
$n(\text{Cl}_2) = \frac{1}{2} n(\text{K}_2\text{MnO}_4)$

$\Rightarrow n(\text{Cl}_2) = \frac{1}{2} \cdot 12.8 = 6.4 \text{ моль}$

$V(\text{Cl}_2) = 6.4 \cdot 22.4 = 143.36 \text{ л} = 143.4 \text{ л}$

Ответ: $V(\text{Cl}_2) = 143.36 \text{ л} = 143.4 \text{ л}$

Задача 5

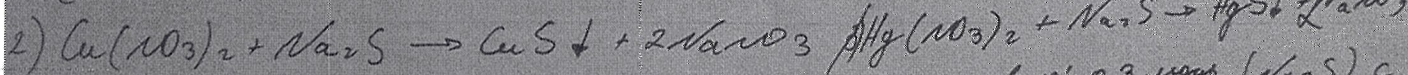


м.мст. $\text{Hg}(\text{NO}_3)_2 = 350 \cdot 0.35 = 122.5 \text{ г}$

$n(\text{Hg}(\text{NO}_3)_2) = \frac{122.5}{325} = 0.4 \text{ моль}$

$n_{\text{прокс.}} \text{ меди} = \frac{5.5}{0.4} = 0.7 \text{ моль} / n_{\text{ок.}} \text{ HgNO}_3 = 0.3 \text{ моль}$

$n(\text{Cu}(\text{NO}_3)_2) = n(\text{Cu}_{\text{прокс.}}) = 0.7 \text{ моль}$ (по У.Х.Р.)



м.р-ра $(\text{Na}_2\text{S}) = 127.600 = 126 \text{ г}$

м.мст. $\text{Na}_2\text{S} = 126 \cdot 0.75 = 108.9 \text{ г}$

$n \text{ Na}_2\text{S} = \frac{108.9}{78} = 1.4 \text{ моль}$

прокс. реагировало: $0.7 \text{ моль Na}_2\text{S}$ (с медью) $(\text{Cu}(\text{NO}_3)_2)$.

~~$\Rightarrow \text{прокс. реагировало: } 0.3 \text{ моль Hg}(\text{NO}_3)_2$~~

+ 205

58.

Вариант № 2

Вопросы решены

$$1) m(\text{Na}_2\text{S}) = 7.3 / 28 = 0.26 \text{ моль}$$

$$2) m(\text{NaNO}_3) = 0.3 \cdot 85 = 25.5 \text{ г}$$

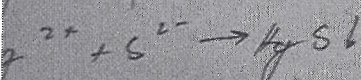
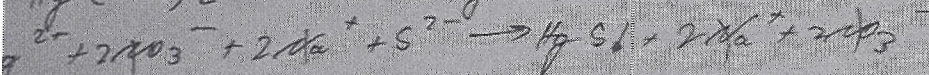
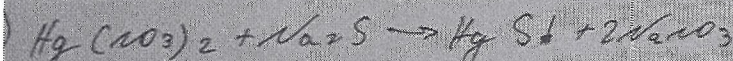
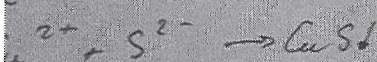
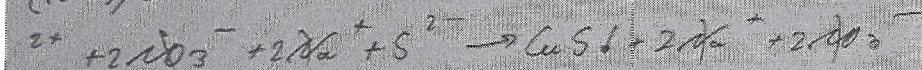
В попутном р-ре:

$$3) m_{\text{ост. Na}_2\text{S}} = 7.4 - 0.3 - 0.1 = 7.0 \text{ г}$$

$$4) m(\text{NaNO}_3) = 0.3 \cdot 2 \cdot 85 + 0.1 \cdot 2 \cdot 85 = 57 + 17 = 74 \text{ г}$$

$$5) \omega(\text{Na}_2\text{S}) = \frac{7.4}{7.4 + 68} = \frac{7.4}{75.4} = 0.098 \approx 10\%$$

$$\text{Вывод: } \omega(\text{Na}_2\text{S}) = 10\%$$

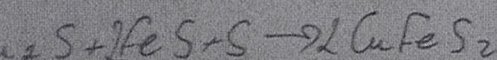
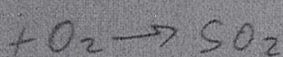
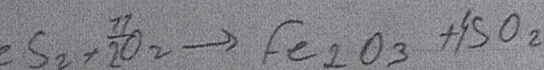
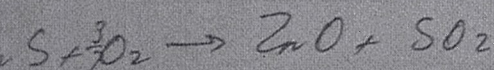
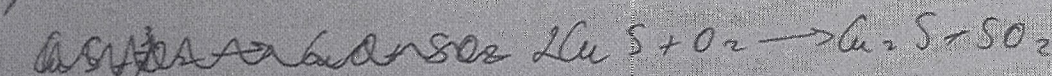


Задача 6

ковешник - CuS Оксиды: SiO₂; CaO; Al₂O₃; ~~MgO~~

гранат - ZnS

шпинель - FeS₂



15.