



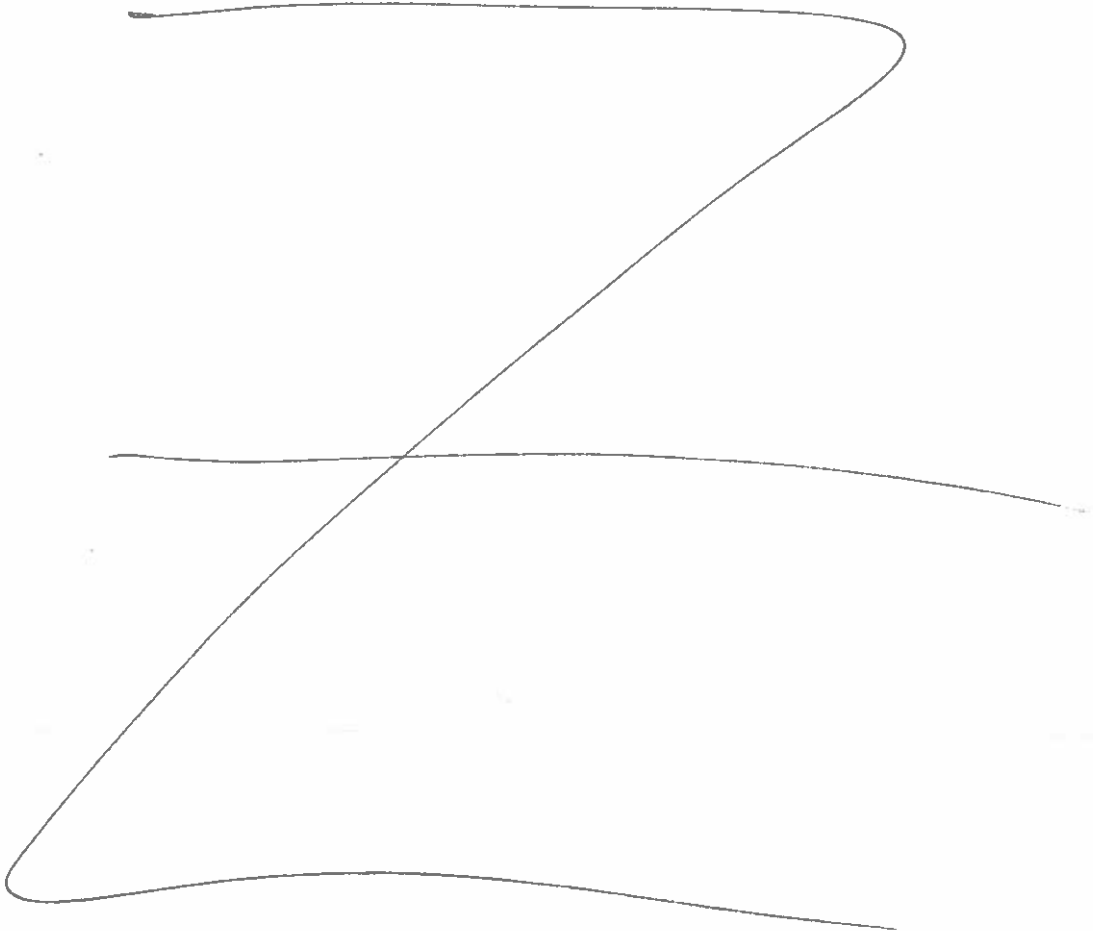
Олимпиада школьников «Гранит науки»
БЛАНК ОЛИМПИАДНОЙ РАБОТЫ

Шифр работы Х32-02
(не заполнять)

Вариант № 1

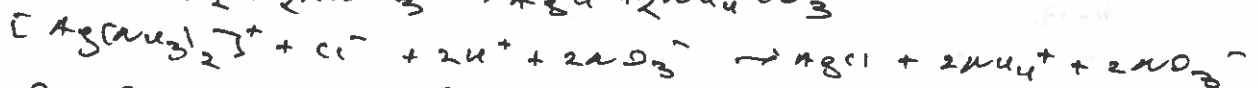
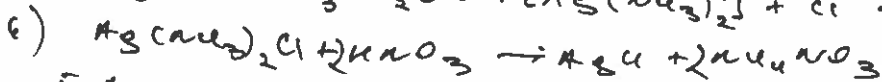
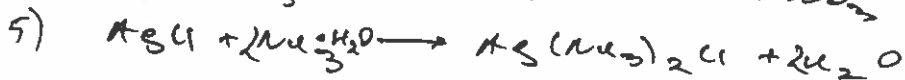
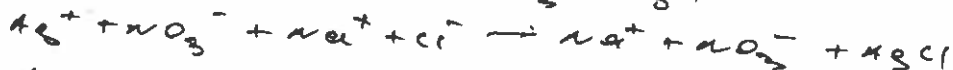
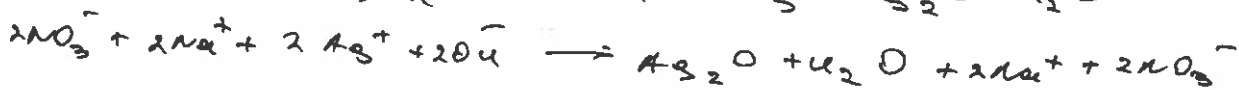
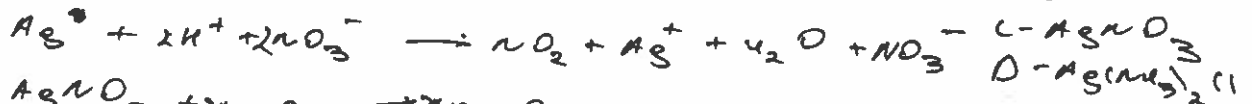
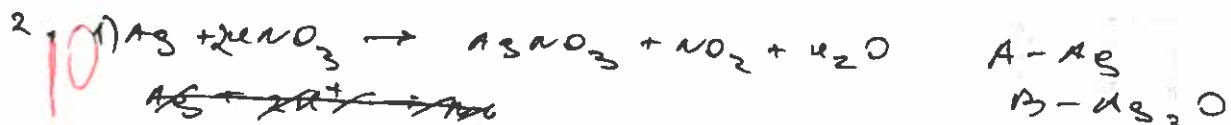
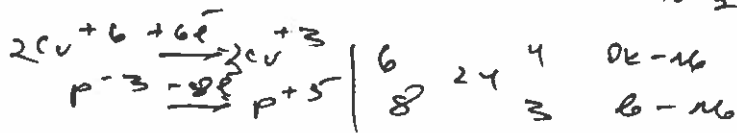
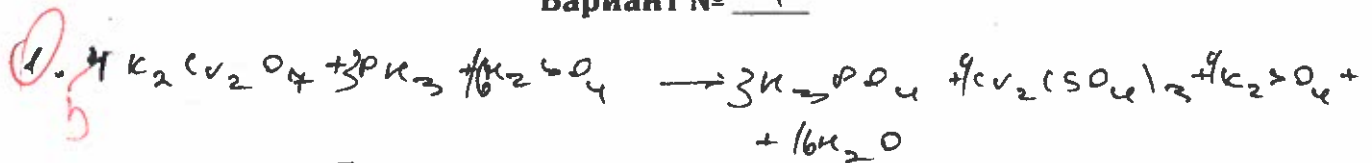
Оценка выполнения олимпиадной работы (заполняется проверяющим)											
№ задания	1	2	3	4	5	6	7	8	9	10	Σ
Полученный балл	5	10	3	12	15	6					51
I проверка	Подпись проверяющего			Σ баллов прописью	пятьдесят один						
	Подпись проверяющего			Σ баллов прописью	пятьдесят один						
II проверка	Подпись проверяющего			Σ баллов прописью	пятьдесят один						
	Подпись проверяющего			Σ баллов прописью	пятьдесят один						

начало на стр. 2

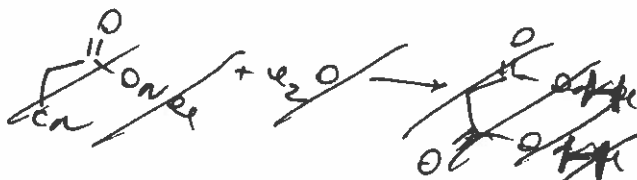
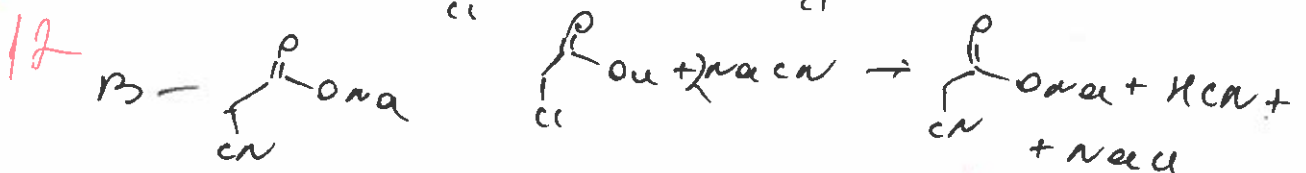
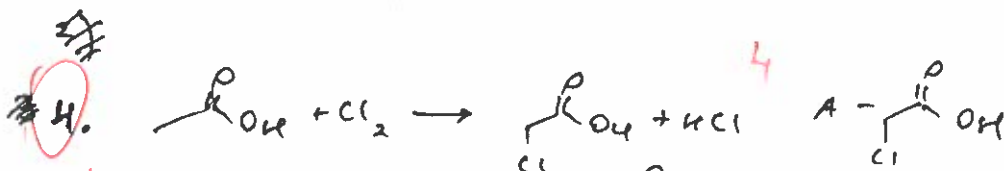
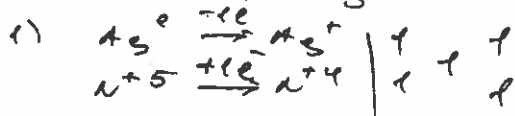




Вариант № 1



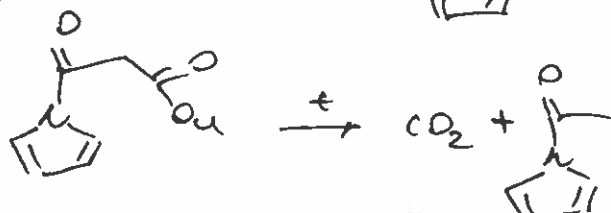
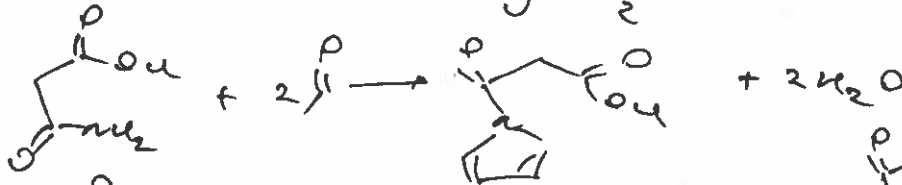
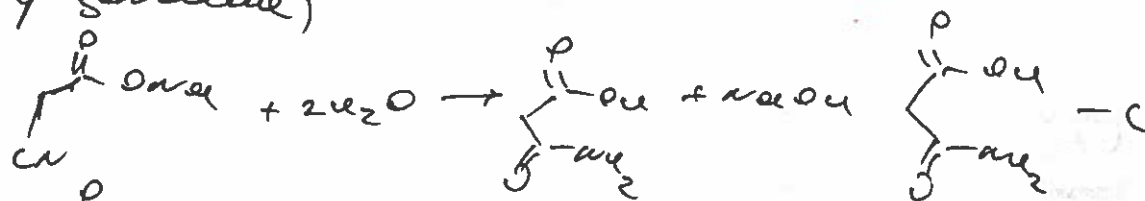
3. баланс для окр:



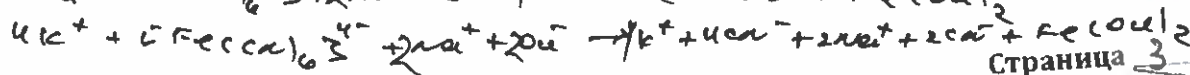
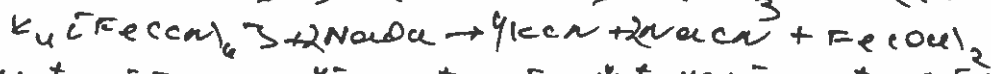
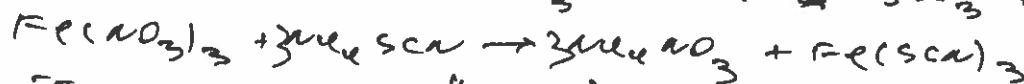
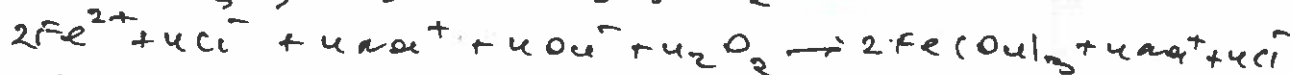
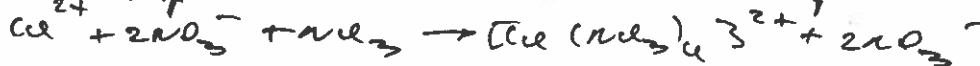
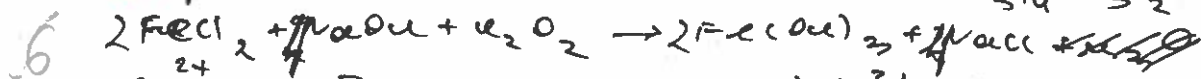
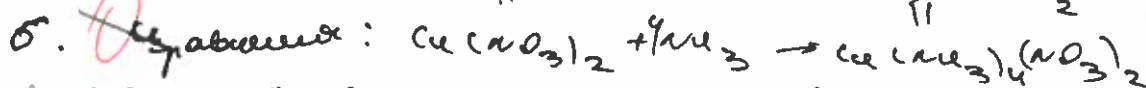
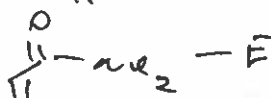
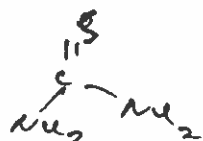
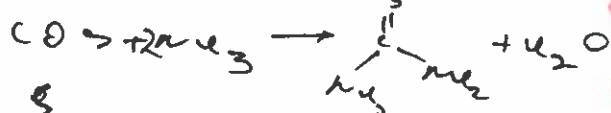


Вариант № 1

4. (продолжение)



3.





Вариант № 1

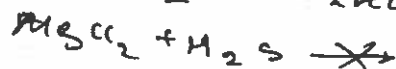
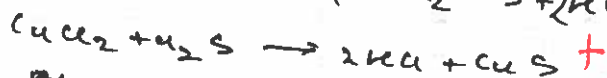
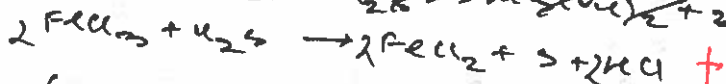
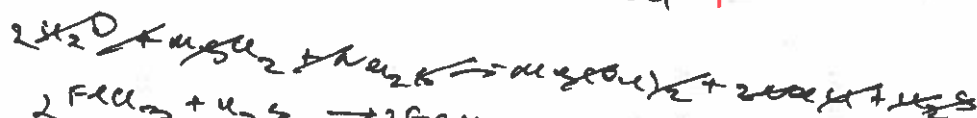
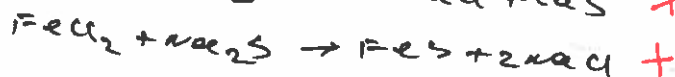
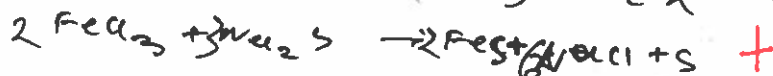
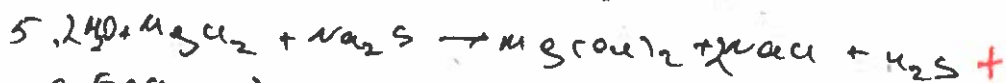
6 (продолжение)

схема:





Вариант № 1



$$\text{MgCl}_2 = x$$

$$\text{FeCl}_3 = y$$

$$\text{CuCl}_2 = z$$

$$\text{FeCl}_2 = u$$

$$58x + 88y + 16z + 86u$$

$$16z + 86u$$

$$\frac{58x + 104y + 86z}{16z + 86u} = 5$$

$$\frac{58x + 104y + 86z}{86u} = 5$$

$$\frac{88y + 58x}{86u} = 5$$

$$\frac{88y + 58x}{86u} = 5$$

$$\frac{64y}{86u} = 1$$

$$y = 1,52$$

$$x = 62$$

$$M(\text{MgSO}_4) = 58 \text{ г/моль}$$

$$M(\text{FeS}) = 88 \text{ г/моль}$$

$$M(\text{S}) = 32 \text{ г/моль}$$

$$M(\text{CuS}) = 96 \text{ г/моль}$$

$$\omega(\text{MgCl}_2) = \frac{62}{62+1}$$

$$\omega(\text{MgCl}_2) = \frac{62 \cdot 95}{62 \cdot 95 + 1,52 \cdot 162,5}$$

$$\omega(\text{MgCl}_2) = \frac{62 \cdot 95}{62 \cdot 95 + 1,52 \cdot 162,5 + 2 \cdot 135} = 0,6008 = 60,08 \%$$

$$\omega(\text{CuCl}_2) = \frac{135}{348,75} = 0,1423 = 14,23 \%$$

$$\omega(\text{FeCl}_3) = \frac{243,75}{348,75} = 0,257 = 25,7 \%$$