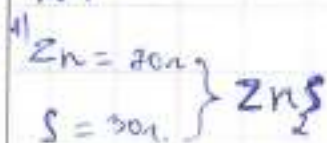


N1



2) HBr-?

$$Mr(Zn) = 65,38$$

$$Mr(S) = 32$$

N2



N4



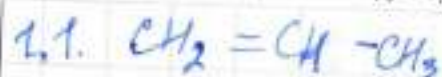
N3. Q=?

~~$$m = 1,7$$~~
$$m = 1,7 кг.$$

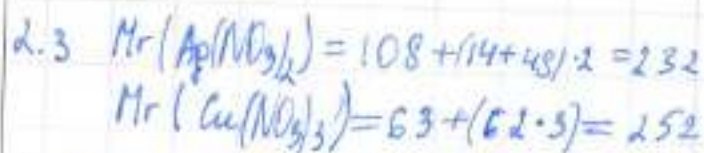
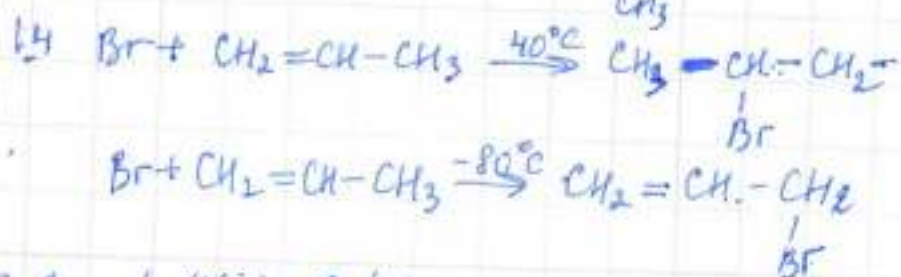
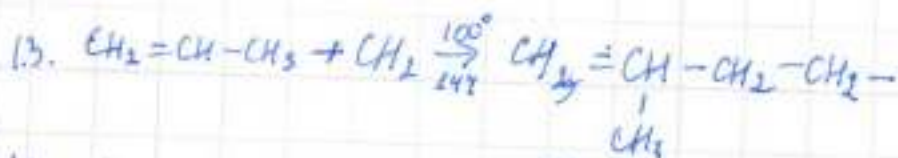
$$C_s = 4186 Дж/кг \cdot K^{-1}$$

$$\Delta T = T_2 - T_1 = 100 - 25 = 75^\circ C.$$

$$Q = 1,7 \cdot 4186 Дж/кг \cdot K^{-1} \cdot 75^\circ C. = 5337450 Дж/кг$$



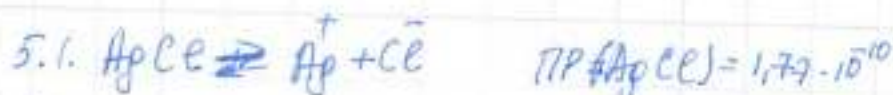
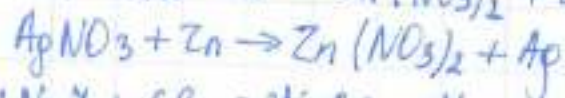
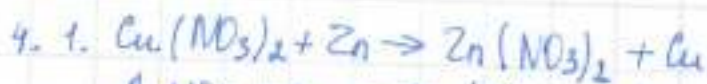
1.2.



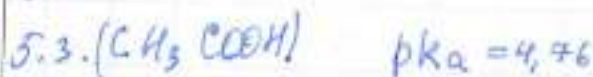
3.1

3.2.

3.3.



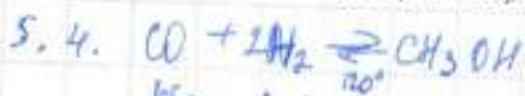
5.2



$4,76 \cdot 0,1 = 0,476$ $0,1 \text{ моль}^{-1}$

$0,476 \cdot 100\% = 47,6\%$

Қатысушының шешімдерін толтыруға арналған еріс / Поле для заполнения решений участника Парақ / Страница №



Қосар 2.0бар

28г 4г

28 8

9-022-Gr-2

Шифрды ұйымдастырушы толтырады
Шифр записывается организатором

Қатысушының шешімдерін толтыруға арналған өріс / Поле для заполнения решений участника Парақ / Страница № 1

№2 Керісімі:
мәс/с₂

Шешуі:

$$Na = 0.022 \times 10^{23} \text{ см}^{-1}$$

$$Na = 70 \times 302 = 0.102^8$$

9-022-0h-2

Шифрды ұйымдастырушы толтырады
Шифр заполняется организатором

Қатысушының шешімдерін толтыруға арналған өріс / Поле для заполнения решений участника Парақ / Страница № 2

$$N_2 \quad p = 1.219 \text{ ғ/моц}^{-1}$$

(52)

$$p = 19 - 52 = 142 \text{ /месі}$$

$$(p = 19 - 52) \quad \text{үрсісі } 7\%$$

21/50 192X

Қатысушының шешімдерін толтыруға арналған өріс / Поле для заполнения решений участника Парақ / Страница № 2/3

№3 (Берілгені:)

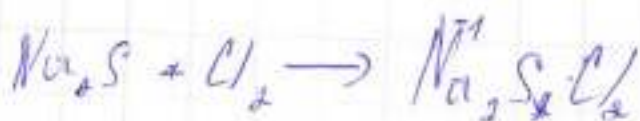
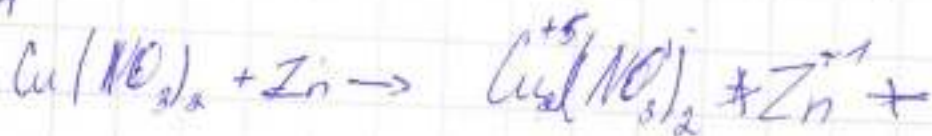
(Шеңбері:)

$$Q = mc_s \Delta T$$

 $(1, 7 \text{ кг})$

$$Q = 1,7 \text{ кг} \cdot 25^\circ = 0,425 \text{ г}$$

№4



1. Берілгені

$$m(\text{Zn}) = 70\text{г}$$

$$m(\text{S}) = 30\text{г}$$

$$\omega(\text{Zn}) = ?$$

$$\omega(\text{S}) = ?$$

Шешуі

$$\omega = \frac{m_{\text{эл}}}{m_{\text{қоспа}}} \cdot 100\% \quad m(\text{ZnS}) = 70\text{г} + 30\text{г} = 100\text{г}$$

$$\omega(\text{Zn}) = \frac{70\text{г}}{100\text{г}} \cdot 100\% = 70\%$$

$$\omega(\text{S}) = \frac{30\text{г}}{100\text{г}} \cdot 100\% = 30\%$$

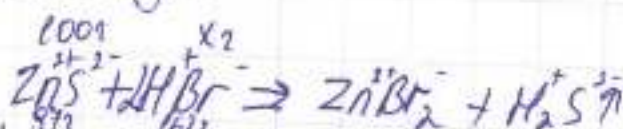
$$n(\delta): m(\text{Zn}) = \omega(\text{Zn}) = 70\% \\ m(\text{S}) = 30\%$$

2. Берілгені

$$m(\text{ZnS}) = 100\text{г}$$

$$n(\text{HBr}) = ?$$

Шешуі



$$M_r(\text{ZnS}) = 65 + 32 = 97\text{г/моль} = M(\text{ZnS}) = 97\text{г}$$

$$M_r(\text{HBr}) = 1 + 80 = 81\text{г/моль}$$

$$M(\text{HBr}) = 2\text{ моль} \cdot 81\text{г/моль} = 162\text{г}$$

$$x = \frac{100 \cdot 162}{97} \approx 167\text{г}$$

$$n(\text{HBr}) = \frac{m(\text{HBr})}{M_r(\text{HBr})} = \frac{167\text{г}}{162\text{г}} \approx 1\text{ моль}$$

$$n(\delta): n(\text{HBr}) = 1\text{ моль} \\ m(\text{HBr}) = 167\text{г}$$

3. Берілгені

$$M_r(\text{He}_2) = 8\text{г/моль}$$

$$M_r(\text{H}_2\text{S}) = 1 \cdot 2 + 32 = 34\text{г/моль}$$

$$n_{\text{He}_2}(\text{H}_2\text{S}) = ?$$

Шешуі

$$n_{\text{He}_2}(\text{H}_2\text{S}) = \frac{M_r(\text{H}_2\text{S})}{M_r(\text{He}_2)} = \frac{34\text{г}}{8\text{г}} = 4,25$$

$$n(\delta): n_{\text{He}_2}(\text{H}_2\text{S}) = 4,25$$

№2. Азот қосылыстары

1. берілгені

$$m(\text{HNO}_3) = 52$$

$$n(\text{HNO}_3) = n(\text{H}_2\text{SO}_4)$$

$$m(\text{H}_2\text{SO}_4) = ?$$

Шешуі

$$m = nM_r \quad n = \frac{m}{M_r}$$

$$M_r(\text{HNO}_3) = 1 + 14 + 16 \cdot 3 = 63 \text{ г/моль}$$

$$M_r(\text{H}_2\text{SO}_4) = 2 \cdot 1 + 32 + 16 \cdot 4 = 98 \text{ г/моль}$$

$$n(\text{HNO}_3) = \frac{m(\text{HNO}_3)}{M_r(\text{HNO}_3)} = \frac{52}{63 \text{ г/моль}} \approx 0,08 \text{ моль}$$

$$m(\text{H}_2\text{SO}_4) = n(\text{H}_2\text{SO}_4) \cdot M_r(\text{H}_2\text{SO}_4) = 0,08 \text{ моль}$$

$$\cdot 98 \text{ г/моль} = 7,842$$

$$\text{я/б: } m(\text{H}_2\text{SO}_4) = 7,842$$

2.

№3. Физика

1. Берілген

$$m_{\text{сү}} = 1,7 \text{ кг}$$

$$T_1 = 25^\circ\text{C}$$

$$T_2 = 100^\circ\text{C}$$

$$c_s = 4186 \frac{\text{Дж}}{\text{кг} \cdot \text{K}}$$

Q - ?

Шешуі

$$Q = mc_s \Delta T$$

$$T_1 = 25^\circ\text{C} = (25 + 273) \text{K} = 298 \text{K}$$

$$T_2 = 100^\circ\text{C} = (100 + 273) \text{K} = 373 \text{K}$$

$$\Delta T = T_2 - T_1 = 373 \text{K} - 298 \text{K} = 75 \text{K}$$

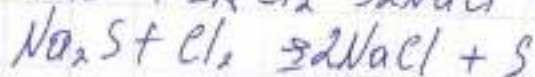
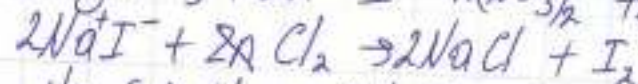
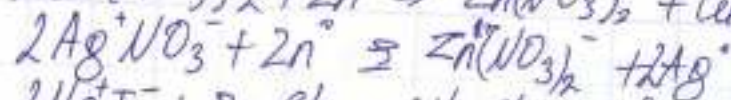
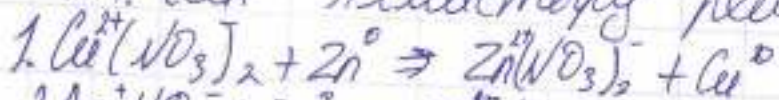
$$Q = 1,7 \text{ кг} \cdot 4186 \frac{\text{Дж}}{\text{кг} \cdot \text{K}} \cdot 75 \text{K} = 534165 \text{ Дж} \approx$$

$$534 \text{ кДж}$$

$$\text{н/б: } Q = 534 \text{ кДж}$$

2.

№4. Есен Алмастери реакциялар



2. Берілгені

Задача №1.

$$M_{\text{доп. в.м.}} = \text{Порошки Zn + S} = 100 \text{ г}$$

$$M_{\text{с.г.}} = \text{Zn} = \frac{65}{100} = 0,65$$

$$M(\text{S}) = \frac{33}{100} = 0,33 \text{ образ в 6 мин.}$$

$$\text{Кис. брановодорода} = \text{BoH}_2\text{O} = 79 + (1 \cdot 2) + 16 = 97 \text{ кис. BoH}_2\text{O}$$

$$p(\text{Be}) = \frac{73 \cdot 96}{98} = \frac{73 \cdot 8}{98} = \frac{584}{98} = 6,0 \dots$$

Отношение на 97 процентность по герцию.

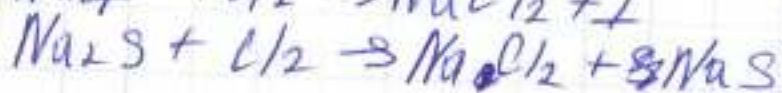
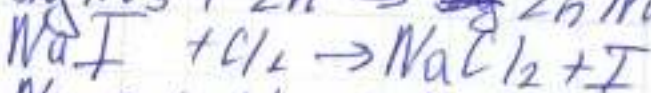
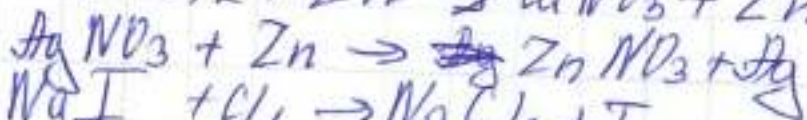
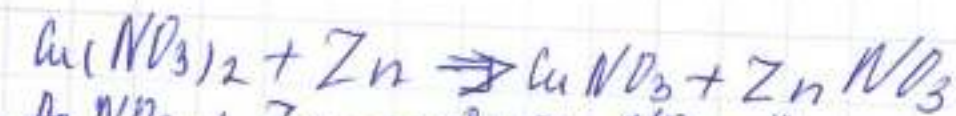
Задача №2.

$$1. M(\text{S}) = 32 + 35 = \frac{67}{7} = 9,05 \text{ г}$$

$$2. V(\text{Na}) = 23 \text{ г} \cdot 1,219 \text{ г мл}^{-1} = \frac{23 \cdot 1,219}{20\%} = \frac{23,219}{20\%} = 1,16$$

Ответ: 1,1 мл.

Задача w/4



Задача №4

