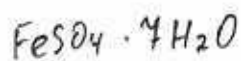


05 - Түрлендірілу - 9-күл.
N1

E = 95



$V_{\text{р-ра}}(\text{FeSO}_4) = 10\text{л} = 10\,000\text{мл}$

$w(\text{FeSO}_4) = 5\% = 0,05$

$\rho_{\text{р-ра}} = 1 \frac{\text{г}}{\text{мл}}$

$m(\text{FeSO}_4 \cdot 7\text{H}_2\text{O}) - ?$

$\rho = \frac{m}{V} \Rightarrow m = \rho \cdot V$

$m_{\text{р-ра}}(\text{FeSO}_4) = 1 \cdot 10\,000 = 10\,000\text{г}$

$m(\text{FeSO}_4) = m_{\text{р-ра}}(\text{FeSO}_4) \cdot w(\text{FeSO}_4) = 10\,000 \cdot 0,05 = 500\text{г}$

$w(\text{FeSO}_4) = \frac{n \cdot m(\text{FeSO}_4)}{M(\text{FeSO}_4)} \cdot 100\% = \frac{152}{278} \cdot 100\% = 54,7\%$

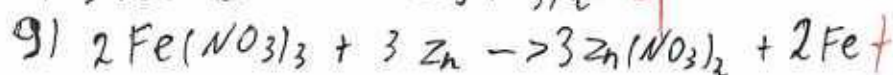
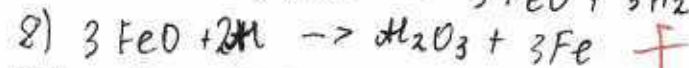
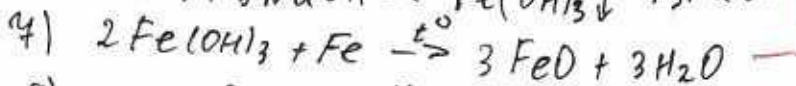
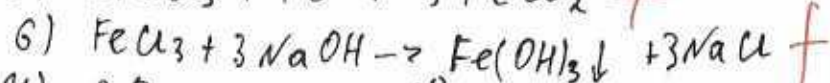
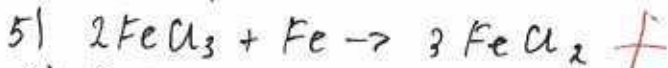
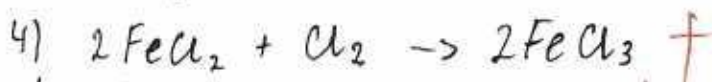
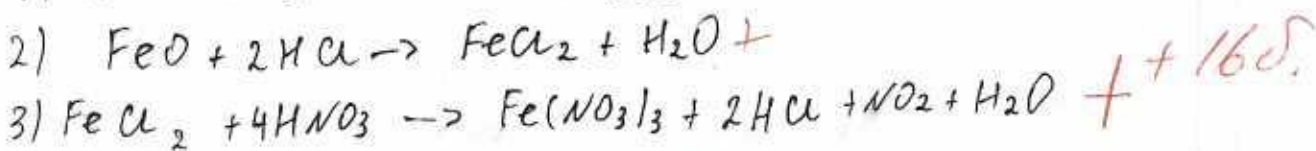
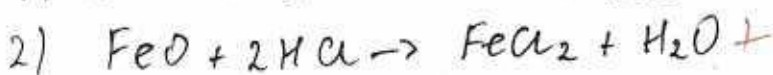
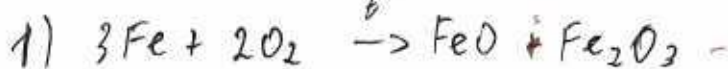
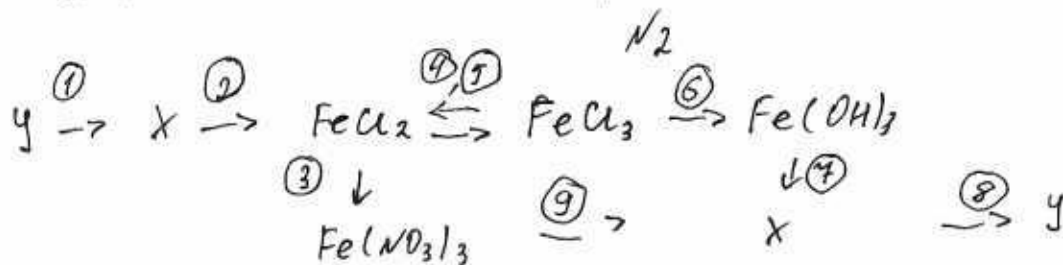
$54,7\% = 0,5468$

$M(\text{FeSO}_4) = 56 + 32 + 16 \cdot 4 = 152 \text{ г/моль}$

$M(\text{FeSO}_4 \cdot 7\text{H}_2\text{O}) = 152 + 7 \cdot 18 = 278 \text{ г/моль}$

$m(\text{FeSO}_4 \cdot 7\text{H}_2\text{O}) = \frac{m(\text{FeSO}_4)}{w(\text{FeSO}_4)} = \frac{500}{0,5468} = 914,4\text{г}$

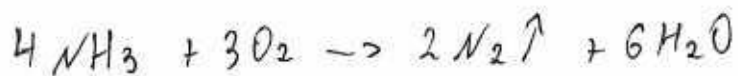
Омбегем: $m(\text{FeSO}_4 \cdot 7\text{H}_2\text{O}) = 914,4\text{г} + 200\text{г}$



1 у3 3

05

№3

 $V(N_2) - ?$ 

$$V = V_m \cdot n$$

$$n(O_2) = \frac{V(O_2)}{V_m} = \frac{80}{22,4} = 3,58 \text{ моль}$$

$$m(O_2) = M(O_2) \cdot n(O_2) = 32 \cdot 3,58 = 114,3 \text{ г}$$

~~$$m(O_2) = M(O_2) \cdot n(O_2) = 32$$~~

$$m(O_2) \text{ без прим.} = 114,3 \cdot 0,9 = 103 \text{ г}$$

$$n \text{ без прим. } (O_2) = \frac{m(O_2)}{M(O_2)} = \frac{103}{32} = 3,2 \text{ моль}$$

из уравнения реакции:

$$n(N_2) = \frac{2}{3} n(O_2) = 2,14 \text{ моль}$$

$$V(N_2) = 22,4 \cdot 2,14 = 48 \text{ л}$$

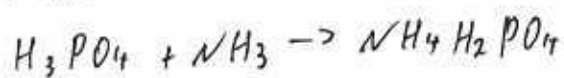
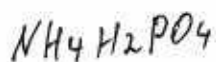
$$V(N_2) \text{ без прим.} = 48 \cdot 0,75 = 36 \text{ л}$$

Ответ: $V(N_2) = 36 \text{ л}$

+200

05

N4



$$S_{\text{ген.}} = 10 \text{ т}$$

$$m(\text{P}) = 9302 \text{ кг } 1 \text{ т} \Rightarrow m(\text{P}) = 93002$$

$$m(\text{NH}_4\text{H}_2\text{PO}_4) - ?$$

$$w(\text{P}) = \frac{n \cdot m(\text{P})}{M(\text{NH}_4\text{H}_2\text{PO}_4)} \cdot 100\% = \frac{31}{115} \cdot 100\% = 27\%$$

$$27\% = 0,27$$

$$M(\text{NH}_4\text{H}_2\text{PO}_4) = 14 + 6 + 31 + 16 \cdot 4 = 115 \text{ г/моль}$$

$$m(\text{NH}_4\text{H}_2\text{PO}_4) = \frac{m(\text{P})}{w(\text{P})} = \frac{9300}{0,27} = 34518,5 \text{ кг}$$

$$\text{Ответ: } m(\text{NH}_4\text{H}_2\text{PO}_4) = 25112$$

N5

