

1)

Дано:

$$m_{\text{сұра}}(\text{NH}_3) = 30 \text{ г}$$

$$w(\text{NH}_3) = 20\%$$

Һайсымы:

$$m(\text{NH}_3) = ?$$

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

Решение:



$$\begin{matrix} (\text{NH}_3) \\ m = x \end{matrix} \cdot n \cdot M = 179 \cdot 98\%$$

$$m(\text{H}_2\text{O}) = 79.9$$

2)

Дано:

$$m(\text{C}_2\text{H}_4\text{O}_2) = 3 \text{ г}$$

$$V(\text{C}_2\text{H}_4\text{O}_2) = 20 \text{ мл}$$

$$M(\text{C}_2\text{H}_4\text{O}_2) = ?$$

$$n = ?$$

Решение:

$$M_r(\text{C}_2\text{H}_4\text{O}_2) = 12 \cdot 2 + 4 \cdot 1 + 16 \cdot 2 = 28 + 32 = 60$$

$$n = \frac{m}{M} = \frac{3}{60} = 0,05 \text{ моль}$$



4)

Дано:

$$w(\text{S}) = 40,506\%$$

$$w(\text{O}_2) = 50,98\%$$

$$x : y : z = ?$$

Решение:

$$A_r(\text{S}) = 32$$

$$A_r(\text{O}_2) = 16 \cdot 2 = 32$$

$$A_r(\text{C}) = 12$$

$$x : y : z = \frac{40,506\%}{32} : \frac{50,98\%}{32}$$

$$\frac{28,114}{12} = 23,14 : 0,94 :$$

$$2,42 = \frac{23,14}{0,94} : \frac{0,94}{0,94}$$

C₂

$$\frac{2,42}{0,94} = 24 : 1 : 2$$