

1.

- , 10% , 0,15% 0,15% . 65% , 18%
1. 70 . (),
2. , , , .
3. .

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| (,) | |
| 1.) $m(O) = m() \cdot w()$; | 1 |
| $m(O) = 70000 \cdot 0,65 = 45500 ()$; | 1 |
|) $m() = 70000 \cdot 0,18 = 12600 ()$; | 1 |
|) $m() = 70000 \cdot 0,10 = 7000 ()$; | 1 |
|) $m(Na) = 70000 \cdot 0,15 = 10500 ()$; | 1 |
|) $m(Cl) = 70000 \cdot 0,15 = 10500 ()$. | 1 |
| 2.) $n(O) = 45500 / 16 / = 2843,8$; | 2 |
|) $n() = 12600 / 12 / = 1050$; | 2 |
|) $n() = 7000 / 1 / = 7000$; | 2 |
|) $n(Na) = 10500 / 23 / = 456,5$; | 2 |
|) $n(Cl) = 10500 / 35,5 / = 295,8$. | 2 |
| 3. $n() : n() : n() : n(Na) : n(Cl) = 2843,8 : 1050 : 7000 : 456,5 : 295,8$; | 1 |
| $n() : n() : n() : n(Na) : n(Cl) = 9,6 : 3,5 : 23,7 : 1,5 : 1$. | 1 |
| Cl, Na, C, O, H. | 2 |
| | 20 |

2.

- 4) ; 5) ; 6) ; 7) ; 8) ; 9) ; 10) ; 1) ; 2) ; 3) ;
- « ; 3) : 1) « »; 2) ; 4) ; 5) ; 6) ; 7) ; 8) ; 9) ; 10) ;

| | |
|----------------|-----------|
| (,) | |
| 1) - (10). | 2 |
| 2) - (4). | 2 |
| 3) . « » (2). | 2 |
| 4) . (5). | 2 |
| 5) . , - (8). | 2 |
| 6) . : (7). | 2 |
| 7) . « » (1). | 2 |
| 8) . (9). | 2 |
| 9) . (3). | 2 |
| 10) . (6). | 2 |
| | 20 |

3.

1. ?
- 2.
- 3.

| | |
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| (,) | |
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|---|-------------------|--------------------------------|-------------------|----|-----|----|
| 1. | | | | | | 2 |
| 2. | | | | | | |
| | BaCl ₂ | H ₂ SO ₄ | AgNO ₃ | HI | KOH | 4 |
| BaCl ₂ | | . | . | - | - | |
| H ₂ SO ₄ | . | | | | | |
| AgNO ₃ | . | . | | . | | |
| HI | - | . | | | | |
| KOH | - | . | | . | | |
| 3. BaCl ₂ + H ₂ SO ₄ = BaSO ₄ + 2HCl | | | | | | 2 |
| BaCl ₂ + 2AgNO ₃ = 2AgCl + Ba(NO ₃) ₂ | | | | | | 2 |
| H ₂ SO ₄ + 2AgNO ₃ = Ag ₂ SO ₄ + 2HNO ₃ | | | | | | 2 |
| H ₂ SO ₄ + 2HI = I ₂ + SO ₂ + 2 H ₂ | | | | | | 2 |
| AgNO ₃ + HI = AgI + HNO ₃ | | | | | | 2 |
| 2AgNO ₃ + 2KOH = Ag ₂ O + 2KNO ₃ + H ₂ O | | | | | | 2 |
| 2KOH + H ₂ SO ₄ = K ₂ SO ₄ + 2H ₂ O () | | | | | | 2 |
| | | | | | | 20 |

4.

200 (%), 1,505 · 10²³.

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| () | |
| 1. + 2 = () ₂ + | 2 |
| 2. n (Ba) = 1,505 · 10 ²³ : 6,02 · 10 ²³ = 0,25 () | 2 |
| 3. n (Ba) = n () = 0,25 | 2 |
| 4. n (Ba() ₂) = n (Ba) = 0,25 | 2 |
| 5. m (Ba() ₂) = n(Ba() ₂) · M(Ba() ₂); m (Ba() ₂) = 0,25 · 171 / = 42,75 | 2 1 |
| 6. m () ₂ = 0,25 · 2 / = 0,5 | 1 |
| 7. m (B) = 0,25 · 137 / = 34,25 | 1 |
| 8. m () = m () + m (B) - m () ₂ ; m () = 200 + 34,25 - 0,5 = 233,75 | 3 1 |
| 9. w (B () ₂) = m(() ₂) : m () · 100 ; w (B () ₂) = 42,75 : 233,75 · 100 = 18,29 % | 2 1 |
| | 20 |

5.

:
 ()₂ SO₃ Ca(HSO₃)₂ CaSO₃
 <
 ()₂ CaCl₂ CaCO₃ CaO CaSO₄

| | |
|---|-----------|
| (,) | |
| 1. $2\text{Ca} + \text{O}_2 = 2\text{CaO}$ | 2 |
| 2. $\text{CaO} + \text{H}_2\text{O} = \text{Ca(OH)}_2$ | 2 |
| 3. $\text{Ca(OH)}_2 + \text{SO}_2 = \text{CaSO}_3 + \text{H}_2\text{O}$ | 2 |
| 4. $\text{CaSO}_3 + \text{SO}_2 + \text{H}_2\text{O} = \text{Ca(HSO}_3)_2$ | 2 |
| 5. $\text{Ca(HSO}_3)_2 + 2\text{KOH} = \text{CaSO}_3 + \text{K}_2\text{SO}_3 + 2\text{H}_2\text{O}$ | 2 |
| 6. $\text{CaO} + \text{H}_2\text{O} = \text{Ca(OH)}_2$ | 2 |
| 7. $\text{Ca(OH)}_2 + 2\text{HCl} = \text{CaCl}_2 + 2\text{H}_2\text{O}$ | 2 |
| 8. $\text{CaCl}_2 + \text{K}_2\text{CO}_3 = \text{CaCO}_3 + 2\text{KCl}$ | 2 |
| 9. $\text{CaCO}_3 = \text{CaO} + \text{CO}_2$ | 2 |
| 10. $\text{CaSO}_4 = \text{CaO} + \text{SO}_3$ | 2 |
| | 20 |