

## 9

## 1

1	2	3	4	5	6	7	8	9	10
4	4	2	4	4	4	4	1	2	2

1 (10 )

## 2

$$1) m(\text{HCl}) = m(\text{HCl}) \cdot (\text{HCl}) = 182,5 \cdot 0,1 = 18,25 \quad (0,5 \text{ )}$$

$$2) m(\text{NaOH}) = m(\text{NaOH}) \cdot (\text{NaOH}) = 60 \cdot 0,2 = 12 \quad (0,5 \text{ )}$$

$$3) \text{HCl} = m(\text{HCl}) / M(\text{HCl}) = 18,55 / 35,5 = 0,5 \quad (0,5 \text{ )}$$

$$4) \text{NaOH} = m(\text{NaOH}) / M(\text{NaOH}) = 12 / 40 = 0,3 \quad (0,5 \text{ )}$$



$$\text{HCl} \quad \text{NaOH.} \\ (1) \quad 0,3 \quad \text{NaCl,} \quad 0,5 - 0,3 = 0,2 \quad \text{HCl.} \quad (2 \text{ )}$$



$$\text{HCl} = \text{KOH} = \text{KCl} = 0,2 \quad (0,5 \text{ )}$$

$$7) m(\text{KOH}) = M(\text{KOH}) \cdot \text{KOH} = 56 \cdot 0,2 = 11,2 \quad (0,5 \text{ )}$$

$$m(\text{NaCl}) = M(\text{NaCl}) \cdot \text{NaCl} = 58,5 \cdot 0,3 = 17,55 \quad (0,5 \text{ )}$$

$$m(\text{KCl}) = M(\text{KCl}) \cdot \text{KCl} = 74,5 \cdot 0,2 = 14,9 \quad (0,5 \text{ )}$$

$$8) m(\text{ - }) = m(\text{ - HCl}) + m(\text{ - NaOH}) + m(\text{KOH}) = 182,5 + 60 + 11,2 = 253,7 \quad (1 \text{ )}$$

$$9) (\text{NaCl}) = m(\text{NaCl}) / m(\text{ - }) = 17,55 / 253,7 = 0,069 \quad (0,5 \text{ )}$$

$$(\text{KCl}) = m(\text{KCl}) / m(\text{ - }) = 14,9 / 253,7 = 0,059 \quad (0,5 \text{ )}$$

$$\text{ : } (\text{NaCl}) = 0,069, (\text{KCl}) = 0,059. (10 \text{ )}$$

## 3

$$1) m(\text{Ni}(\text{NO}_3)_2) = m(\text{ - }) \cdot (\text{Ni}(\text{NO}_3)_2) = (100 + 15) \cdot 0,082 = 9,43 \quad (1 \text{ )}$$

$$2) m(\text{H}_2\text{O}) = m(\text{Ni}(\text{NO}_3)_2 \cdot x\text{H}_2\text{O}) - m(\text{Ni}(\text{NO}_3)_2) = 15 - 9,43 = 5,57 \quad (1 \text{ )}$$

$$3) M(\text{Ni}(\text{NO}_3)_2) = 182,71 / \quad (1 \text{ )}$$

$$9,43 \quad \text{---} \mid \quad 5,57 \quad \text{H}_2\text{O}$$

$$182,71 \quad \text{---} \mid \quad a \quad \text{H}_2\text{O}$$

$$a = 107,9 \quad (1 \text{ )}$$

$$4) x = m(\text{H}_2\text{O}) / M(\text{H}_2\text{O}) = 107,9 / 18 = 5,996 \quad 6 \quad (1 \text{ )}$$

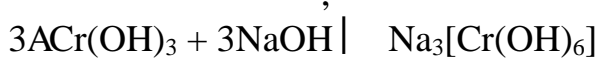
$$\text{ : Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O} (5 \text{ )}$$

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- 1)  $\text{CO}_2 + 2\text{Mg} \rightarrow 2\text{MgO} + \text{C}$  (1+1 )
- 2)  $\text{Ca} + 2\text{C} \rightarrow \text{CaC}_2$  (1+1 )
- 3)  $\text{CaC}_2 + 2\text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2 + 2\text{H}_2$  (1+1 )
- 4)  $\text{Ca(OH)}_2 + \text{CO}_2 \rightarrow \text{CaCO}_3 + \text{H}_2\text{O}$  (1+1 )
- 5)  $\text{CaCO}_3 + \text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{Ca(HCO}_3)_2$  (1+1 )
- 5+5=10 ( 1 )

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:  $\text{Cr}_2(\text{SO}_4)_3, \text{NH}_4\text{OH}, \text{NaOH}, \text{HCl}, \text{BaCl}_2$ ;



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