

## 10

## 1.

(0,5)		1
		1
	0,5	1
		1
		1
(1)		1
		1
		1
		1
		1
		1
		10

## 2.

(1)	$\text{C}_n\text{H}_{2n-2} + \text{O}_2 \rightarrow n\text{CO}_2 + (n-1)\text{H}_2\text{O}$ $5 \text{C}_5\text{H}_8 + 8\text{O}_2 \rightarrow 5\text{CO}_2 + 6\text{H}_2\text{O}$ $\text{C}_n\text{H}_{2n-2} + 2\text{Br}_2 \rightarrow \text{C}_n\text{H}_{2n-2}\text{Br}_4$ $\text{CO}_2 + 2\text{Na} \rightarrow \text{Na}_2\text{CO}_3 + \text{H}_2\text{O}$	4
	$n(\text{Br}_2) = m/$ $n(\text{Br}_2) = 64 / 160 / = 0,4$ $0,4$ $\text{C}_n\text{H}_{2n-2} \text{-----} 2\text{Br}_2$ $1 \qquad \qquad \qquad 2$ $= 0,2$ $(\text{C}_n\text{H}_{2n-2}) = 14n - 2$	1



3.

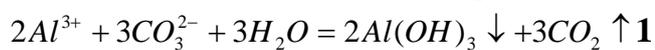
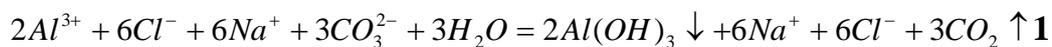
	$  \begin{array}{cccccc}  1 & 2 & 3 & 4 & 5 & \\  & - & \equiv & - & \text{C} & = \text{CH}_2 \\  & & & \downarrow & & \\  & & & 6 & & \\  & & & \text{CH}_3 & &   \end{array}  $	1
( 0,5 )	$  \begin{array}{cccccc}  4- & & -4- & & -2 ( & 4- & & -4- & -2)  \end{array}  $	3
	$  \begin{array}{l}  1- \text{sp}^3 \\  2- \text{sp} \\  3- \text{sp} \\  4- \text{sp}^2 \\  5- \text{sp}^2 \\  6- \text{sp}^3 ( \quad )  \end{array}  $	2
( 1 )	$  \begin{array}{cccccc}  3 & - & \equiv & - & \text{C}(\text{CH}_3) & = \text{CH}_2 + & 1 \\  3 & - & \equiv & - & \text{C}(\text{CH}_3) & 1 & \text{CH}_3 \\  4- & & -4- & & & -2 &   \end{array}  $	2
	$  \begin{array}{cccccc}  3 & - & \equiv & - & \text{C}(\text{CH}_3) & 1 & \text{CH}_3 + & 1 \\  3 & \text{CH} & = & 1 & (\text{CH}_3) & 1 & \text{CH}_3 \\  4- & & -3,4- & & & -2 &   \end{array}  $	2
	$  \begin{array}{cccccc}  3 & \text{CH} & = & 1 & (\text{CH}_3) & 1 & \text{CH}_3 + & 1 \\  3 & \text{CH}_2 & & 1_2 & (\text{CH}_3) & 1 & \text{CH}_3 \\  2- & & -2,3,3- & & & &   \end{array}  $	2
( )	$  \begin{array}{cccccc}  3 & - & \equiv & - & \text{C}(\text{CH}_3) & 1 & \text{CH}_3 + & 1 \\  3 & \text{C} & \text{l} & = & (\text{CH}_3) & 1 & \text{CH}_3 \\  4- & & -2,4- & & & -2 &   \end{array}  $	2
	$  \begin{array}{cccccc}  3 & \text{C} & \text{l} & = & (\text{CH}_3) & 1 & \text{CH}_3 + & 1 \\  3 & \text{C} & \text{l}_2 & & 2 & (\text{CH}_3 & 1 & \text{CH}_3 \\  2- & & -2,4,4- & & & &   \end{array}  $	2
( 1 )	$  \begin{array}{cccccc}  1 & 2 & 3 & 4 & 5 & 6 \\  2= & & = & & = & 2 \\  & & & -1,3,5 & &   \end{array}  $	2
	$  \begin{array}{cccccc}  1 & 2 & 3 & 4 & 5 & 6 \\  3 & \equiv & & 2 & = & 2 \\  & -5- & -2 & & &   \end{array}  $	2
	$  \begin{array}{cccccc}  1 & 2 & 3 & 4 & 5 \\  \equiv & & ( & 3) & = \text{C} & \text{CH}_3 \\  3- & & & -3- & -1 &   \end{array}  $	2

( 18)		
		20

4.

( 1 )	$3 \text{ Na} + \text{Na}_4 + \text{Na}_2 \text{ }_3$ $4 + \text{l}_2 \text{ }_3 \text{ l} + \text{l}$ $3 \text{ l} + \text{l}_2 \text{ }_2 \text{ l}_2 + \text{l}$ $2 \text{ l}_2 + \text{l}_2 \text{ }_3 \text{ l} + \text{l}$ $\text{l}_3 + \text{l}_2 \text{ }_4 \text{ l} + \text{l}$ $4 + 4 \text{ l}_2 \text{ }_4 \text{ l} + 4 \text{ l}$	1 1
	$\omega(\text{Na}) = m(\text{Na}) / m(\text{Na}_2\text{CO}_3) = 46,2 / 0,6 = 77$ $n(\text{Na}) = m(\text{Na}) / 23 = 77 / 23 = 3,35$	1
	$m(\text{Na}) = n(\text{Na}) \cdot 23 = 3,35 \cdot 23 = 77$	1
	$m(\text{Na}_2\text{CO}_3) = 82 - 41 = 41$	1
	$\omega(\text{Na}) = m(\text{Na}) / m(\text{Na}_2\text{CO}_3) = 41 / 82 = 0,5 (50\%)$	1
		6

5.



- 5

. 2

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