

Формулировка задания: «Составьте уравнение реакции, используя для расстановки коэффициентов метод электронного баланса. Определите окислитель и восстановитель.»

2017

1. $\text{KI} + \text{KIO}_3 + \dots \rightarrow \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
2. $\text{Cr}(\text{OH})_3 + \text{Cl}_2 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$
3. $\text{H}_2\text{S} + \text{Cl}_2 + \dots \rightarrow \text{H}_2\text{SO}_4 + \dots$
4. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{HCl} \rightarrow \text{Cl}_2 + \text{CrCl}_3 + \dots + \dots$
5. $\text{SO}_2 + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \text{K}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$
6. $\text{NaClO}_3 + \text{MnO}_2 + \dots \rightarrow \text{Na}_2\text{MnO}_4 + \text{NaCl} + \dots$
7. $\text{Na}_2\text{SO}_3 + \text{CrO}_3 + \dots \rightarrow \text{Na}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$
8. $\text{NaNO}_2 + \text{Na}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}(\text{NO}_3)_3 + \text{H}_2\text{O}$
9. $\text{NO} + \text{KClO} + \dots \rightarrow \text{KNO}_3 + \dots + \text{H}_2\text{O}$
10. $\text{FeSO}_4 + \text{NaClO} + \dots \rightarrow \text{Fe}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
11. $\text{Al} + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}_2(\text{SO}_4)_3 + \text{K}_2\text{SO}_4 + \dots$
12. $\text{KClO}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{KClO}_3 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
13. $\text{FeSO}_4 + \text{KMnO}_4 + \dots \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
14. $\text{CrCl}_2 + \text{H}_2\text{SO}_4(\text{конц.}) \rightarrow \text{Cr}_2(\text{SO}_4)_3 + \dots + \text{HCl} + \dots$
15. $\text{CrCl}_3 + \text{Cl}_2 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$
16. $\text{Na}_2\text{SO}_3 + \text{KIO}_3 + \dots \rightarrow \text{I}_2 + \text{K}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$
17. $\text{Cr}_2\text{O}_3 + \text{KBrO}_3 + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \dots + \text{CO}_2$
18. $\text{H}_3\text{PO}_3 + \text{KIO}_3 + \dots \rightarrow \dots + \text{I}_2 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
19. $\text{KClO}_3 + \text{Na}_2\text{SO}_3 + \dots \rightarrow \dots + \text{Cl}_2 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
20. $\text{H}_2\text{O}_2 + \dots + \text{NaOH} \rightarrow \text{Na}_2\text{CrO}_4 + \text{NaNO}_3 + \dots$
21. $\text{Na}_2\text{SO}_3 + \text{CrO}_3 + \dots \rightarrow \text{Cr}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
22. $\text{Cr}_2(\text{SO}_4)_3 + \text{Br}_2 + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \text{NaBr} + \dots + \text{H}_2\text{O}$
23. $\text{Cr}_2(\text{SO}_4)_3 + \text{H}_2\text{O}_2 + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \text{Na}_2\text{SO}_4 + \dots$
24. $\text{Na}_2\text{S} + \text{HNO}_3(\text{конц.}) \rightarrow \text{Na}_2\text{SO}_4 + \dots + \dots$
25. $\dots + \text{KMnO}_4 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{Cr}_2\text{O}_7 + \text{H}_2\text{SO}_4 + \text{MnSO}_4 + \dots$
26. $\text{Cr}(\text{OH})_3 + \text{Br}_2 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$
27. $\text{NH}_3 + \text{K}_2\text{FeO}_4 + \dots \rightarrow \text{N}_2 + \text{Fe}_2(\text{SO}_4)_3 + \text{H}_2\text{O} + \dots$
28. $\text{H}_2\text{O}_2 + \text{Br}_2 + \dots \rightarrow \text{O}_2 + \text{NaBr} + \dots$
29. $\text{MnO} + \text{KClO}_3 + \dots \rightarrow \text{K}_2\text{MnO}_4 + \dots + \text{H}_2\text{O}$
30. $\text{KNO}_2 + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}(\text{NO}_3)_3 + \text{H}_2\text{O}$
31. $\text{NaCrO}_2 + \text{Br}_2 + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$

32. $\text{HNO}_3(\text{конц.}) + \dots \rightarrow \text{Fe}(\text{NO}_3)_3 + \text{HCl} + \dots + \text{H}_2\text{O}$
33. $\text{CuS} + \dots \rightarrow \text{CuSO}_4 + \text{NO}_2 + \dots$
34. $\text{HCHO} + \text{KMnO}_4 + \dots \rightarrow \text{CO}_2 + \text{K}_2\text{SO}_4 + \dots + \dots$
35. $\text{P}_2\text{O}_3 + \text{HClO}_4 + \dots \rightarrow \text{HCl} + \dots$
36. $\text{FeSO}_4 + \text{KClO}_3 + \dots \rightarrow \dots + \text{KCl} + \text{H}_2\text{O}$
37. $\text{NaNO}_2 + \text{KIO}_3 + \dots \rightarrow \text{I}_2 + \text{K}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$
38. $\text{Cr}_2\text{O}_3 + \text{NaBrO} + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \dots + \text{CO}_2$
39. $\text{S} + \text{HClO}_4 + \dots \rightarrow \text{H}_2\text{SO}_4 + \text{HCl}$
40. $\text{B} + \text{HClO}_3 + \dots \rightarrow \text{H}_3\text{BO}_3 + \text{HCl}$
41. $\text{B} + \text{HNO}_3 + \dots \rightarrow \text{H}_3\text{BO}_3 + \text{NO}$
42. $\text{NO}_2 + \text{KClO} + \dots \rightarrow \text{KNO}_3 + \dots + \text{H}_2\text{O}$

2016

43. $\text{P}_2\text{O}_3 + \text{HClO}_3 + \dots \rightarrow \text{HCl} + \dots$
44. $\text{KI} + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
45. $\text{Cl}_2 + \text{NH}_3 \cdot \text{H}_2\text{O} \rightarrow \dots + \text{NH}_4\text{Cl} + \dots$
46. $\text{NaCrO}_2 + \dots + \text{NaOH} \rightarrow \dots + \text{NaBr} + \text{H}_2\text{O}$
47. $\text{NH}_3 + \text{KMnO}_4 + \dots \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
48. $\text{Cr}_2\text{O}_3 + \dots + \text{KOH} \rightarrow \dots + \text{KNO}_2 + \text{H}_2\text{O}$
49. $\text{SO}_2 + \text{HMnO}_4 + \text{H}_2\text{O} \rightarrow \dots + \dots$
50. $\text{AlP} + \text{HNO}_3(\text{конц.}) \rightarrow \text{H}_3\text{PO}_4 + \dots + \dots + \text{H}_2\text{O}$
51. $\text{Zn} + \text{KMnO}_4 + \dots \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \dots$
52. $\text{PCl}_3 + \text{HNO}_3 + \dots \rightarrow \text{NO} + \text{HCl} + \dots$
53. $\text{Al} + \text{KOH} + \dots \rightarrow \text{K}_3[\text{Al}(\text{OH})_6] + \dots$
54. $\text{Ca}(\text{HS})_2 + \text{HNO}_3(\text{конц.}) \rightarrow \dots + \text{H}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$
55. $\text{SO}_2 + \text{KMnO}_4 + \text{H}_2\text{O} \rightarrow \text{MnSO}_4 + \dots + \dots$
56. $\text{KMnO}_4 + \text{Zn} + \dots \rightarrow \dots + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
57. $\dots + \text{KNO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \text{K}_2\text{SO}_4 + \text{NO} + \dots$
58. $\text{KNO}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{N}_2 + \text{FeCl}_3 + \text{Fe}_2(\text{SO}_4)_3 + \dots + \dots$
59. $\text{KNO}_2 + \dots + \text{HNO}_3 \rightarrow \text{Cr}(\text{NO}_3)_3 + \dots + \text{H}_2\text{O}$
60. $\text{KNO}_2 + \text{CrSO}_4 + \dots \rightarrow \text{N}_2 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
61. $\text{Fe}(\text{CrO}_2)_2 + \text{HNO}_3(\text{конц.}) \rightarrow \dots + \text{Cr}(\text{NO}_3)_3 + \dots + \text{H}_2\text{O}$
62. $\text{H}_3\text{PO}_3 + \text{KMnO}_4 + \text{HCl} \rightarrow \dots + \text{KCl} + \dots + \text{H}_2\text{O}$
63. $\text{Na}_2\text{SO}_3 + \text{Zn} + \dots \rightarrow \text{H}_2\text{S} + \dots + \text{NaCl} + \text{H}_2\text{O}$
64. $\text{KClO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \dots + \text{KCl} + \text{H}_2\text{O}$

65. $\dots + \text{I}_2 \rightarrow \text{HIO}_3 + \text{NO}_2 + \dots$
66. $\text{Na}_2\text{SO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
67. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{Na}_2\text{SO}_3 + \dots \rightarrow \text{Cr}(\text{OH})_3 + \dots + \text{KOH}$
68. $\text{KNO}_2 + \dots + \text{HCl} \rightarrow \text{MnCl}_2 + \dots + \text{KCl} + \text{H}_2\text{O}$
69. $\text{Cr}_2(\text{SO}_4)_3 + \text{Br}_2 + \dots \rightarrow \text{Na}_2\text{CrO}_4 + \dots + \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
70. $\text{NH}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{N}_2 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
71. $\text{Ca}_3\text{P}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
72. $\text{NaClO}_3 + \text{MnO}_2 + \dots \rightarrow \text{Na}_2\text{MnO}_4 + \dots + \text{H}_2\text{O}$
73. $\text{FeO} + \dots \rightarrow \dots + \text{NO} + \text{H}_2\text{O}$
74. $\text{P}_2\text{O}_3 + \text{K}_2\text{CrO}_4 + \dots \rightarrow \text{H}_3\text{PO}_4 + \dots + \text{KCl} + \dots$
75. $\text{KMnO}_4 + \text{HBr} \rightarrow \dots + \text{Br}_2 + \text{KBr} + \dots$
76. $\text{KMnO}_4 + \dots \rightarrow \text{MnBr}_2 + \text{Br}_2 + \dots + \text{H}_2\text{O}$
77. $\text{I}_2 + \dots \rightarrow \text{KI} + \text{KIO}_3 + \dots$
78. $\text{KNO}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
79. $\text{PH}_3 + \text{CrO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{H}_3\text{PO}_4 + \dots + \dots$
80. $\text{HI} + \text{HNO}_3(\text{конц.}) \rightarrow \text{HIO}_3 + \dots + \dots$
81. $\text{Mg}_3\text{P}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{Mg}_3(\text{PO}_4)_2 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
82. $\text{KI} + \text{H}_2\text{SO}_4(\text{конц.}) \rightarrow \dots + \text{S} + \dots + \text{H}_2\text{O}$
83. $\text{FeCl}_2 + \text{H}_2\text{SO}_4(\text{конц.}) \rightarrow \text{Fe}_2(\text{SO}_4)_3 + \dots + \text{HCl} + \dots$

2015

84. $\text{Fe}(\text{OH})_3 + \text{Br}_2 + \dots \rightarrow \text{K}_2\text{FeO}_4 + \dots + \text{H}_2\text{O}$
85. $\text{Cr}(\text{OH})_3 + \text{Br}_2 + \text{KOH} \rightarrow \text{K}_2\text{CrO}_4 + \dots + \dots$
86. $\text{KClO}_4 + \text{Na}_2\text{SO}_3 + \dots \rightarrow \dots + \text{Cl}_2 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
87. $\text{KClO}_4 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \dots + \text{KCl} + \text{H}_2\text{O}$
88. $\text{Ca}(\text{ClO})_2 + \text{HCl} \rightarrow \text{CaCl}_2 + \dots + \dots$
89. $\text{KIO}_3 + \text{KI} + \dots \rightarrow \text{I}_2 + \text{K}_2\text{SO}_4 + \dots$
90. $\text{Cr}_2\text{O}_3 + \dots + \text{Na}_2\text{CO}_3 \rightarrow \text{Na}_2\text{CrO}_4 + \text{NaNO}_2 + \dots$
91. $\text{SO}_2 + \text{KMnO}_4 + \dots \rightarrow \text{MnSO}_4 + \dots + \text{H}_2\text{SO}_4$
92. $\text{Cr}_2(\text{SO}_4)_3 + \text{Cl}_2 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \text{KCl} + \dots + \text{H}_2\text{O}$
93. $\text{K}_2\text{SO}_3 + \dots + \text{H}_2\text{O} \rightarrow \dots + \text{MnO}_2 + \text{KOH}$
94. $\dots + \text{CrCl}_2 \rightarrow \text{Cr}(\text{NO}_3)_3 + \dots + \text{NO}_2 + \text{H}_2\text{O}$
95. $\text{P} + \text{HNO}_3(\text{конц.}) \rightarrow \text{H}_3\text{PO}_4 + \dots + \dots$
96. $\text{KCrO}_2 + \text{Cl}_2 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$
97. $\text{NaHS} + \text{MnO}_2 + \dots \rightarrow \dots + \text{S} + \text{NaNO}_3 + \text{H}_2\text{O}$

98. $\text{K}_2\text{MnO}_4 + \dots \rightarrow \text{MnBr}_2 + \text{Br}_2 + \dots + \text{H}_2\text{O}$
99. $\text{Mg} + \text{KMnO}_4 + \dots \rightarrow \dots + \text{MgSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
100. $\text{H}_2\text{S} + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{S} + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$
101. $\text{MnO}_2 + \text{KCl} + \dots \rightarrow \text{Cl}_2 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
102. $\text{ZnS} + \dots \rightarrow \text{ZnSO}_4 + \text{NO}_2 + \dots$
103. $\text{NaNO}_2 + \text{CrO}_3 + \dots \rightarrow \dots + \text{Cr}_2(\text{SO}_4)_3 + \text{H}_2\text{O}$
104. $\text{CrO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{Br}_2 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
105. $\text{Mg} + \text{Na}_2\text{SO}_3 + \dots \rightarrow \dots + \text{H}_2\text{S} + \text{NaCl} + \text{H}_2\text{O}$
106. $\text{MnO}_2 + \text{KClO}_3 + \dots \rightarrow \text{K}_2\text{MnO}_4 + \dots + \text{CO}_2$
107. $\text{CaI}_2 + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{H}_2\text{S} + \text{I}_2 + \dots$
108. $\dots + \text{NaNO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \text{NO} + \dots + \text{H}_2\text{O}$
109. $\text{Br}_2 + \text{KOH} \rightarrow \dots + \text{KBrO}_3 + \dots$
110. $\text{N}_2\text{O} + \text{KMnO}_4 + \dots \rightarrow \text{NO}_2 + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$

2014

111. $\text{Na}_2\text{SO}_3 + \text{KMnO}_4 + \dots \rightarrow \dots + \text{MnO}_2 + \text{KOH}$
112. $\text{Cl}_2 + \text{I}_2 + \dots \rightarrow \text{HIO}_3 + \dots$
113. $\text{H}_2\text{O}_2 + \text{HIO}_3 \rightarrow \text{I}_2 + \dots + \dots$
114. $\text{Ca}(\text{HS})_2 + \text{HNO}_3(\text{конц.}) \rightarrow \dots + \text{H}_2\text{SO}_4 + \text{NO}_2 + \dots$
115. $\text{Zn} + \text{KNO}_3 + \dots \rightarrow \text{NH}_3 + \text{K}_2\text{ZnO}_2 + \dots$
116. $\text{KMnO}_4 + \text{H}_2\text{C}_2\text{O}_4 + \dots \rightarrow \text{CO}_2 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
117. $\dots + \text{KMnO}_4 \rightarrow \text{N}_2 + \text{MnO}_2 + \text{KOH} + \dots$
118. $\text{Mn}(\text{OH})_2 + \text{Cl}_2 + \dots \rightarrow \text{MnO}_2 + \text{KCl} + \dots$
119. $\text{K}_2\text{MnO}_4 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + \dots + \dots$
120. $\text{MnO}_2 + \dots + \text{K}_2\text{CO}_3 \rightarrow \text{K}_2\text{MnO}_4 + \text{KNO}_2 + \dots$
121. $\text{H}_2\text{S} + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}_2(\text{SO}_4)_3 + \text{S} + \dots$
122. $\text{KI} + \text{KMnO}_4 + \dots \rightarrow \text{I}_2 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
123. $\text{Ca}_3\text{P}_2 + \dots + \text{H}_2\text{O} \rightarrow \text{Ca}_3(\text{PO}_4)_2 + \text{MnO}_2 + \dots$
124. $\text{SO}_2 + \text{HMnO}_4 + \dots \rightarrow \dots + \text{MnSO}_4$
125. $\text{H}_3\text{PO}_3 + \text{HNO}_3(\text{конц.}) \rightarrow \text{H}_3\text{PO}_4 + \dots + \dots$
126. $\text{KNO}_2 + \text{KI} + \dots \rightarrow \text{NO} + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
127. $\text{KNO}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{N}_2 + \text{FeCl}_3 + \dots + \dots + \text{H}_2\text{O}$
128. $\text{Na}_2\text{SO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \text{K}_2\text{SO}_4 + \dots + \text{H}_2\text{O}$

2013

129. $\text{NH}_3 + \text{KMnO}_4 + \dots \rightarrow \dots + \text{K}_2\text{MnO}_4 + \text{H}_2\text{O}$

130. $\text{FeSO}_4 + \text{KClO}_3 + \dots \rightarrow \text{Fe}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
131. $\text{NaBrO}_3 + \dots + \text{NaOH} \rightarrow \text{NaF} + \text{NaBrO}_4 + \dots$
132. $\text{Cr}_2\text{O}_3 + \dots + \text{KOH} \rightarrow \text{K}_2\text{CrO}_4 + \text{KNO}_2 + \dots$
133. $\text{Cu} + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{NO}_2 + \dots + \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$
134. $\text{NaNO}_3 + \text{Cu} + \dots \rightarrow \dots + \text{Na}_2\text{SO}_4 + \text{NO}_2 + \text{H}_2\text{O}$
135. $\text{KNO}_2 + \text{KMnO}_4 + \dots \rightarrow \text{KNO}_3 + \text{MnCl}_2 + \dots + \text{H}_2\text{O}$
136. $\text{Na}_2\text{CrO}_4 + \dots + \text{H}_2\text{SO}_4(\text{разб.}) \rightarrow \text{I}_2 + \text{Cr}_2(\text{SO}_4)_3 + \dots + \dots$
137. $\text{FeSO}_4 + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
138. $\text{KClO}_3 + \text{CrCl}_3 + \dots \rightarrow \text{K}_2\text{CrO}_4 + \dots + \text{H}_2\text{O}$
139. $\text{FeSO}_4 + \text{KMnO}_4 + \dots \rightarrow \dots + \text{K}_2\text{SO}_4 + \text{K}_2\text{MnO}_4$

2012

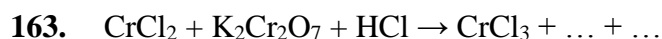
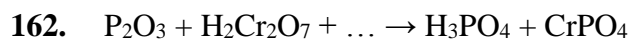
140. $\text{KClO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{Cl}_2 + \dots + \text{H}_2\text{O}$
141. $\text{CrCl}_2 + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \text{CrCl}_3 + \dots + \text{H}_2\text{O}$
142. $\text{K}_2\text{CrO}_4 + \text{HCl} \rightarrow \text{CrCl}_3 + \dots + \dots + \text{H}_2\text{O}$
143. $\text{FeSO}_4 + \text{KClO}_3 + \dots \rightarrow \text{K}_2\text{FeO}_4 + \dots + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
144. $\text{FeSO}_4 + \text{Ca}(\text{ClO})_2 + \dots \rightarrow \text{Fe}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
145. $\text{Fe}(\text{OH})_2 + \text{KClO} + \dots \rightarrow \dots + \text{Fe}_2(\text{SO}_4)_3 + \text{H}_2\text{O}$
146. $\text{MnO}_2 + \dots + \text{HNO}_3 \rightarrow \dots + \text{Cl}_2 + \text{KNO}_3 + \text{H}_2\text{O}$
147. $\text{Na}_2\text{SO}_3 + \dots + \text{NaOH} \rightarrow \dots + \text{Ag} + \text{NaNO}_3 + \text{H}_2\text{O}$

2011

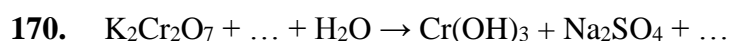
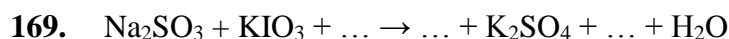
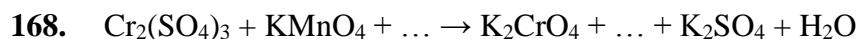
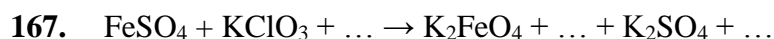
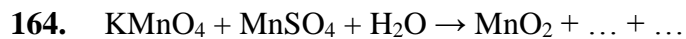
148. $\text{Mn}(\text{OH})_2 + \text{Cl}_2 + \text{KOH} \rightarrow \text{MnO}_2 + \dots + \dots$
149. $\text{FeSO}_4 + \dots + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{MnSO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
150. $\text{Na}_2\text{SO}_3 + \dots + \text{KOH} \rightarrow \text{K}_2\text{MnO}_4 + \dots + \text{H}_2\text{O}$
151. $\text{H}_2\text{O}_2 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{O}_2 + \text{MnSO}_4 + \dots + \dots$
152. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{H}_2\text{S} + \text{H}_2\text{SO}_4 \rightarrow \text{Cr}_2(\text{SO}_4)_3 + \text{K}_2\text{SO}_4 + \dots + \dots$
153. $\text{KMnO}_4 + \text{HCl} \rightarrow \text{MnCl}_2 + \text{Cl}_2 + \dots + \dots$
154. $\text{MnO} + \text{KClO}_3 + \text{KOH} \rightarrow \text{K}_2\text{MnO}_4 + \text{KCl} + \dots$
155. $\text{Cl}_2 + \text{I}_2 + \text{H}_2\text{O} \rightarrow \text{HIO}_3 + \dots$
156. $\text{Na}_2\text{SO}_3 + \dots + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{MnSO}_4 + \dots + \text{H}_2\text{O}$

2010

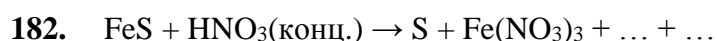
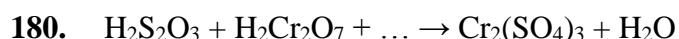
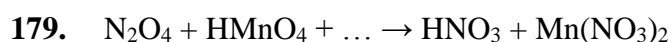
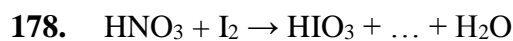
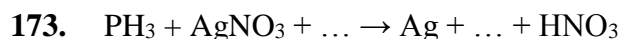
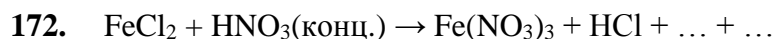
157. $\text{Al}_2\text{S}_3 + \text{HNO}_3(\text{конц.}) \rightarrow \text{S} + \dots + \dots + \text{H}_2\text{O}$
158. $\text{P}_2\text{O}_3 + \text{HNO}_3 + \dots \rightarrow \text{NO} + \dots$
159. $\text{KMnO}_4 + \text{NH}_3 \rightarrow \text{MnO}_2 + \text{N}_2 + \dots + \dots$
160. $\text{NO}_2 + \text{P}_2\text{O}_3 + \dots \rightarrow \text{NO} + \text{K}_2\text{HPO}_4 + \dots$



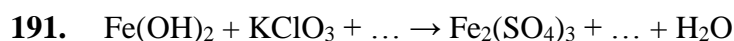
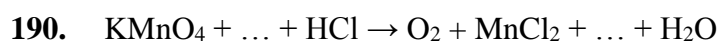
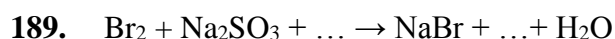
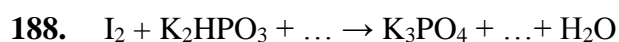
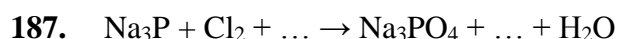
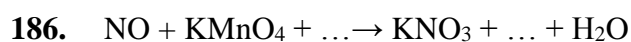
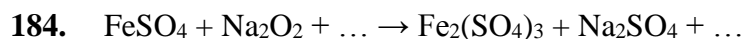
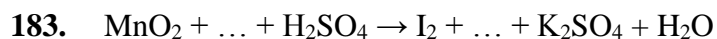
2009



2008



Задания разных лет



192. $\text{FeCl}_2 + \text{H}_2\text{O}_2 + \dots \rightarrow \text{Fe}(\text{OH})_3 + \text{KCl} + \dots$
193. $\text{Na}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{NaBr} + \text{Br}_2 + \text{H}_2\text{O}$
194. $\text{HClO}_3 + \text{P} \rightarrow \text{HCl} + \dots$
195. $\text{KClO} + \text{NH}_3 \rightarrow \text{N}_2 + \text{KCl} + \dots$
196. $\text{NaBr} + \text{NaBrO}_3 + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{Na}_2\text{SO}_4 + \dots$
197. $\text{NaI} + \text{H}_2\text{SO}_4 \rightarrow \dots + \text{H}_2\text{S} + \text{Na}_2\text{SO}_4 + \dots$
198. $\text{Fe} + \text{K}_2\text{Cr}_2\text{O}_7 + \dots \rightarrow \dots + \text{Cr}_2(\text{SO}_4)_3 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
199. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{HCl} \rightarrow \text{Cl}_2 + \text{KCl} + \dots + \dots$
200. $\text{K}_2\text{Cr}_2\text{O}_7 + \dots + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \text{Cr}_2(\text{SO}_4)_3 + \dots + \text{H}_2\text{O}$
201. $\text{MnSO}_4 + \text{H}_2\text{O}_2 + \dots \rightarrow \text{MnO}_2 + \text{Na}_2\text{SO}_4 + \dots$
202. $\text{K}_2\text{Cr}_2\text{O}_7 + \text{FeCl}_2 + \text{HCl} \rightarrow \text{FeCl}_3 + \dots + \text{KCl} + \dots$
203. $\dots + \text{KIO}_3 + \text{H}_2\text{SO}_4 \rightarrow \text{I}_2 + \dots + \text{H}_2\text{O}$
204. $\text{S} + \text{Ba}(\text{OH})_2 \rightarrow \text{BaS} + \text{BaSO}_3 + \dots$
205. $\text{P} + \text{HNO}_3 + \dots \rightarrow \text{H}_3\text{PO}_4 + \dots$
206. $\text{NaMnO}_4 + \text{Na}_2\text{SO}_3 + \dots \rightarrow \text{Na}_2\text{MnO}_4 + \dots + \text{H}_2\text{O}$
207. $\text{MnSO}_4 + \text{NaClO} + \text{NaOH} \rightarrow \text{MnO}_2 + \dots + \dots + \dots$
208. $\text{FeSO}_4 + \text{MnO}_2 + \text{H}_2\text{SO}_4 \rightarrow \text{Fe}_2(\text{SO}_4)_3 + \dots + \dots$
209. $\text{FeSO}_4 + \text{H}_2\text{O}_2 + \text{H}_2\text{SO}_4 \rightarrow \dots + \dots$
210. $\text{KMnO}_4 + \text{Na}_2\text{S} + \text{H}_2\text{SO}_4 \rightarrow \dots + \dots + \text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4 + \text{H}_2\text{O}$
211. $\text{KMnO}_4 + \text{K}_2\text{S} + \text{H}_2\text{O} \rightarrow \dots + \dots + \text{KOH}$
212. $\text{K}_2\text{CrO}_4 + \text{H}_2\text{S} + \text{H}_2\text{O} \rightarrow \text{Cr}(\text{OH})_3 + \dots + \text{KOH}$
213. $\text{HMnO}_4 + \text{H}_2\text{S} \rightarrow \text{S} + \text{MnO}_2 + \dots$
214. $\text{HClO}_4 + \text{NO} + \dots \rightarrow \text{HNO}_3 + \text{HCl}$
215. $\text{B} + \text{HNO}_3 + \text{HF} \rightarrow \text{HBF}_4 + \text{NO}_2 + \dots$
216. $\text{Si} + \text{HNO}_3 + \text{HF} \rightarrow \text{H}_2\text{SiF}_6 + \text{NO} + \dots$
217. $\text{K}_2\text{CrO}_4 + (\text{NH}_4)_2\text{S} + \text{KOH} + \text{H}_2\text{O} \rightarrow \dots + \text{S} + \text{NH}_3$
218. $\text{Na}_3[\text{Cr}(\text{OH})_6] + \text{H}_2\text{O}_2 \rightarrow \dots + \text{NaOH} + \text{H}_2\text{O}$
219. $\text{Be} + \text{NaOH} + \text{H}_2\text{O} \rightarrow \dots + \text{H}_2$