

Name: _____
Hour: _____ Date: _____

Chemistry: *Chemical Word Equations*

Directions: Write a balanced chemical equation for each of the word equations below.

1. aqueous sodium chloride reacts with aqueous lead (II) nitrate to yield a lead (II) chloride precipitate and aqueous sodium nitrate

2. aqueous barium nitrate reacts with sulfuric acid [$\text{H}_2\text{SO}_4(\text{aq})$] to yield a barium sulfate precipitate and nitric acid [$\text{HNO}_3(\text{aq})$]

3. silver nitrate reacts in solution with potassium chromate to yield a silver chromate precipitate and soluble potassium nitrate

4. solid calcium carbonate reacts with hydrochloric acid [$\text{HCl}(\text{aq})$] to yield aqueous calcium chloride, carbon dioxide gas, and liquid water

5. aqueous zinc chloride reacts with dihydrogen monosulfide gas to yield a zinc sulfide precipitate and hydrochloric acid

6. magnesium nitrate reacts in solution with potassium hydroxide to yield a magnesium hydroxide precipitate and soluble potassium nitrate

Balancing Equations Race

- 1) ___ C₃H₈ + ___ O₂ → ___ CO₂ + ___ H₂O
- 2) ___ Al + ___ Fe₃N₂ → ___ AlN + ___ Fe
- 3) ___ Na + ___ Cl₂ → ___ NaCl
- 4) ___ H₂O₂ → ___ H₂O + ___ O₂
- 5) ___ C₆H₁₂O₆ + ___ O₂ → ___ H₂O + ___ CO₂
- 6) ___ H₂O + ___ CO₂ → ___ C₇H₈ + ___ O₂
- 7) ___ NaClO₃ → ___ NaCl + ___ O₂
- 8) ___ (NH₄)₃PO₄ + ___ Pb(NO₃)₄ → ___ Pb₃(PO₄)₄ + ___ NH₄NO₃
- 9) ___ BF₃ + ___ Li₂SO₃ → ___ B₂(SO₃)₃ + ___ LiF
- 10) ___ C₇H₁₇ + ___ O₂ → ___ CO₂ + ___ H₂O
- 11) ___ CaCO₃ + ___ H₃PO₄ → ___ Ca₃(PO₄)₂ + ___ H₂CO₃
- 12) ___ Ag₂S → ___ Ag + ___ S₈
- 13) ___ KBr + ___ Fe(OH)₃ → ___ KOH + ___ FeBr₃
- 14) ___ KNO₃ + ___ H₂CO₃ → ___ K₂CO₃ + ___ HNO₃
- 15) ___ Pb(OH)₄ + ___ Cu₂O → ___ PbO₂ + ___ CuOH
- 16) ___ Cr(NO₂)₂ + ___ (NH₄)₂SO₄ → ___ CrSO₄ + ___ NH₄NO₂
- 17) ___ KOH + ___ Co₃(PO₄)₂ → ___ K₃PO₄ + ___ Co(OH)₂
- 18) ___ Sn(NO₂)₄ + ___ Pt₃N₄ → ___ Sn₃N₄ + ___ Pt(NO₂)₄
- 19) ___ B₂Br₆ + ___ HNO₃ → ___ B(NO₃)₃ + ___ HBr
- 20) ___ ZnS + ___ AlP → ___ Zn₃P₂ + ___ Al₂S₃

Balancing Chemical Equations Worksheet

1. _____ H_2 + _____ O_2 \rightarrow _____ H_2O
2. _____ N_2 + _____ H_2 \rightarrow _____ NH_3
3. _____ S_8 + _____ O_2 \rightarrow _____ SO_3
4. _____ N_2 + _____ O_2 \rightarrow _____ N_2O
5. _____ HgO \rightarrow _____ Hg + _____ O_2
6. _____ CO_2 + _____ H_2O \rightarrow _____ $\text{C}_6\text{H}_{12}\text{O}_6$ + _____ O_2
7. _____ Zn + _____ HCl \rightarrow _____ ZnCl_2 + _____ H_2
8. _____ SiCl_4 + _____ H_2O \rightarrow _____ H_4SiO_4 + _____ HCl
9. _____ Na + _____ H_2O \rightarrow _____ NaOH + _____ H_2
10. _____ H_3PO_4 \rightarrow _____ $\text{H}_4\text{P}_2\text{O}_7$ + _____ H_2O
11. _____ $\text{C}_{10}\text{H}_{16}$ + _____ Cl_2 \rightarrow _____ C + _____ HCl
12. _____ CO_2 + _____ NH_3 \rightarrow _____ $\text{OC}(\text{NH}_2)_2$ + _____ H_2O
13. _____ Si_2H_3 + _____ O_2 \rightarrow _____ SiO_2 + _____ H_2O_3
14. _____ $\text{Al}(\text{OH})_3$ + _____ H_2SO_4 \rightarrow _____ $\text{Al}_2(\text{SO}_4)_3$ + _____ H_2O
15. _____ Fe + _____ O_2 \rightarrow _____ Fe_2O_3
16. _____ $\text{Fe}_2(\text{SO}_4)_3$ + _____ KOH \rightarrow _____ K_2SO_4 + _____ $\text{Fe}(\text{OH})_3$
17. _____ $\text{C}_7\text{H}_6\text{O}_2$ + _____ O_2 \rightarrow _____ CO_2 + _____ H_2O
18. _____ H_2SO_4 + _____ HI \rightarrow _____ H_2S + _____ I_2 + _____ H_2O
19. _____ FeS_2 + _____ O_2 \rightarrow _____ Fe_2O_3 + _____ SO_2
20. _____ Al + _____ FeO \rightarrow _____ Al_2O_3 + _____ Fe
21. _____ Fe_2O_3 + _____ H_2 \rightarrow _____ Fe + _____ H_2O
22. _____ Na_2CO_3 + _____ HCl \rightarrow _____ NaCl + _____ H_2O + _____ CO_2
23. _____ K + _____ Br_2 \rightarrow _____ KBr
24. _____ C_7H_{16} + _____ O_2 \rightarrow _____ CO_2 + _____ H_2O
25. _____ P_4 + _____ O_2 \rightarrow _____ P_2O_5

Another Balancing Equations Sheet!

Balance these equations!

- 1) ____ AlBr_3 + ____ K \rightarrow ____ KBr + ____ Al
- 2) ____ FeO + ____ PdF_2 \rightarrow ____ FeF_2 + ____ PdO
- 3) ____ P_4 + ____ Br_2 \rightarrow ____ PBr_3
- 4) ____ LiCl + ____ Br_2 \rightarrow ____ LiBr + ____ Cl_2
- 5) ____ PbBr_2 + ____ HCl \rightarrow ____ HBr + ____ PbCl_2
- 6) ____ CoBr_3 + ____ CaSO_4 \rightarrow ____ CaBr_2 + ____ $\text{Co}_2(\text{SO}_4)_3$
- 7) ____ Na_3P + ____ CaF_2 \rightarrow ____ NaF + ____ Ca_3P_2
- 8) ____ Mn + ____ HI \rightarrow ____ H_2 + ____ MnI_3
- 9) ____ Li_3PO_4 + ____ NaBr \rightarrow ____ Na_3PO_4 + ____ LiBr
- 10) ____ CaF_2 + ____ Li_2SO_4 \rightarrow ____ CaSO_4 + ____ LiF
- 11) ____ HBr + ____ $\text{Mg}(\text{OH})_2$ \rightarrow ____ MgBr_2 + ____ H_2O
- 12) ____ LiNO_3 + ____ CaBr_2 \rightarrow ____ $\text{Ca}(\text{NO}_3)_2$ + ____ LiBr
- 13) ____ AgNO_3 + ____ Li \rightarrow ____ LiNO_3 + ____ Ag
- 14) ____ $\text{Si}(\text{OH})_4$ + ____ NaBr \rightarrow ____ SiBr_4 + ____ NaOH
- 15) ____ NaCN + ____ CuCO_3 \rightarrow ____ Na_2CO_3 + ____ $\text{Cu}(\text{CN})_2$