

Science 10
Balancing Chemical Equations
Work Sheet

Date Answers

Balance the following equations. Use only whole numbers.

- 1) 2 Na + 2 H₂O → 2 NaOH + H₂
- 2) Cu + 2 AgNO₃ → Cu(NO₃)₂ + 2 Ag
- 3) Ca(NO₃)₂ + 2 NaOH → Ca(OH)₂ + 2 NaNO₃
- 4) 2 SO₂ + O₂ → 2 SO₃
- 5) CH₄ + 2 O₂ → CO₂ + 2 H₂O
- 6) AlCl₃ + 3 K → 3 KCl + Al
- 7) 4 NH₃ + 3 O₂ → 2 N₂ + 6 H₂O
- 8) 2 CuO → 2 Cu + O₂
- 9) 2 HCl + Na₂CO₃ → 2 NaCl + H₂O + CO₂
- 10) 6 CO₂ + 6 H₂O → C₆H₁₂O₆ + 6 O₂

Determine whether the following equations are balanced. If not, give the correct equation.

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|--|----------|--------------------------------------|-------------------------------------|
| 1) P + 5Cl ₂ → PCl ₅ | Correct? | Yes | ☒ No |
| <u>2P + 5Cl₂ → 2PCl₅</u> | | | |
| 2) H ₂ SO ₄ + FeS → FeSO ₄ + H ₂ S | Correct? | ☒ Yes | No |
| 3) Zn + 2HCl → ZnCl ₂ + 2H ₂ | Correct? | Yes | ☒ No |
| <u>Zn + 2HCl → ZnCl₂ + H₂</u> | | | |
| 4) 2Fe + O ₂ → Fe ₂ O ₃ | Correct? | Yes | ☒ No |
| <u>4Fe + 3O₂ → 2Fe₂O₃</u> | | | |
| 5) P ₄ + 5O ₂ → P ₄ O ₁₀ | Correct? | ☒ Yes | No |