

Balancing Chemical Equations

Balance the chemical reaction:



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Step 1. Write out coefficients



Step 2. Construct the atom equations:

$$\text{Mg: } a = 3x$$

$$\text{N: } 2a = 2x + y$$

$$\text{H: } 4a = 3y$$

Balancing Chemical Equations

Step 3. Make an initial guess and solve for coefficients:

Mg: $a = 3x$ Try $a = 3$, then $x = 1$

N: $2a = 2x + y$

H: $4a = 3y$ For $a = 3$, then $y = 4$

Balancing Chemical Equations

Step 3. Make an initial guess and solve for coefficients:

Mg: $a = 3x$ Try $a = 3$, then $x = 1$

N: $2a = 2x + y$ Use this equation as a check.

H: $4a = 3y$ For $a = 3$, then $y = 4$

Write the balanced reaction:

