

Solutions

Each answer shows the steps, then the **result**.

2.1

- Macroscopic, symbolic, particulate

2.2

- Two

2.3

- The number of each type of atom

3.1 B

- the same number of each atom (conservation of mass)

3.2

(a)

- $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$

(b)

- 3 N_2 with 9 H_2 (a 1:3 ratio) makes 6 NH_3

3.3

- Atoms are conserved in a reaction; they are rearranged, not created or destroyed, so the count of each element must match on both sides