

4.3 Chemical Equations

M R P L E W J L E T T E R S F R I R G I V A I F L
T J T U W E Z B O R R N F Q A I M F I N B R E K U
Z O U D Z V W X V M K S L N G E C M S Y L W J Q P
E P R O D U C T S F Z Z V B G C B J O J U I A C F
L N O X Q M V N W X P O P Y L C B A L A N C E D T
Y W H J L P L E V M S H S F S A R O I P O W Y O G
C C H E M I C A L E Q U A T I O N P Z J W X C L R
I Z Q F R J W H G T M Q G T C Z P K K U X I A W E
C N Q V M R I Y E H N Z B W T I A L H W J U P I A
K G Y R N L I W K W O K V J Z S Q S P B Q Q H J C
M R V Y S Y M B O L I C R L U Y J E Z E M S B J T
A C O V A X R S C P I Q D K F O R M U L A S H Q A
V M N D X W R K Y H C T B N L A S E B U B I A Y N
I X V N V J C R I D C X B I V L H V U F G G Q W T
C O N S E R V A T I O N O F M A S S S P D O T I S
C O E F F I C I E N T S N L A V O I S I E R O G K
J N N W Q I C B S M I J N G A I P F A V N O L E R

1. In a chemical reaction, the _____ are written to the left of an arrow and the products are written to the right.
2. Chemical reactions obey the law of _____.
3. Chemical change always involves the conversion of pure substances (elements and compounds) called reactants into new pure substances called _____.
4. A chemical reaction may be represented using a _____.
5. A _____ equation is a set of chemical symbols and formulas that identify the reactants and products in a chemical reaction.
6. These integers are placed in front of the formula or a chemical symbol for an element.
7. In a chemical equation, _____ indicate the compound's state.
8. Antoine _____ is credited with determining that water results from the combination of the elements oxygen and hydrogen.
9. The law of conservation of mass states that the total mass of the products is always _____ to the total mass of the reactants in a chemical reaction.
10. A skeleton equation simply shows the _____ of the reactants and products.
11. A _____ chemical equation shows the identities of each pure substance involved as well as the matching number of atoms of each element on both sides of a chemical equation.