Name: _____ Group: _____ Date: _____

CONCEPT REVIEW 15

Balancing chemical equations

ST

PAGES 108–112

Complete this Concept Review so you can keep a record of what you have learned.

Definitions

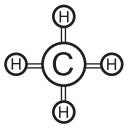
- A physical change alters _____
- A chemical change alters _____
- The law of conservation of mass states that _____
- Balancing a chemical equation consists _____

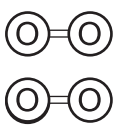
Signs pointing to the occurrence of a chemical change

- _____
- _____
- _____
- _____
- _____

Example of conservation of mass

Before the reaction



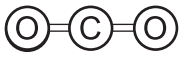


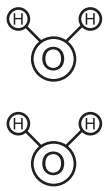
$CH_{4(g)}$ + $2\ O_{2(g)}$

16 g + 64 g

_____ g

After the reaction





$CO_{2(g)}$ + $2\ H_2O_{(g)}$

44 g + _____ g

_____ g

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Example of interpreting a chemical equation

Chemical equation	$CH_{4(g)}$	+	$2\ O_{2(g)}$	→	$CO_{2(g)}$	+	$2\ H_2O_{(g)}$
Interpretation	_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____	_____

Total number of atoms of each element before and after the reaction

Before the chemical reaction		After the chemical reaction	
Reactants	Number of atoms	Product	Number of atoms
$N_2 + 3\ H_2$	_____	$2\ NH_3$	_____
	_____		_____

Rules to apply when balancing chemical equations

- _____
- _____
- _____
- _____
- _____