

# DEPARTMENT MEETING

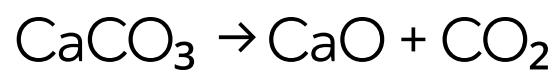
Venue: \_\_\_\_\_

Date/Time: \_\_\_\_\_

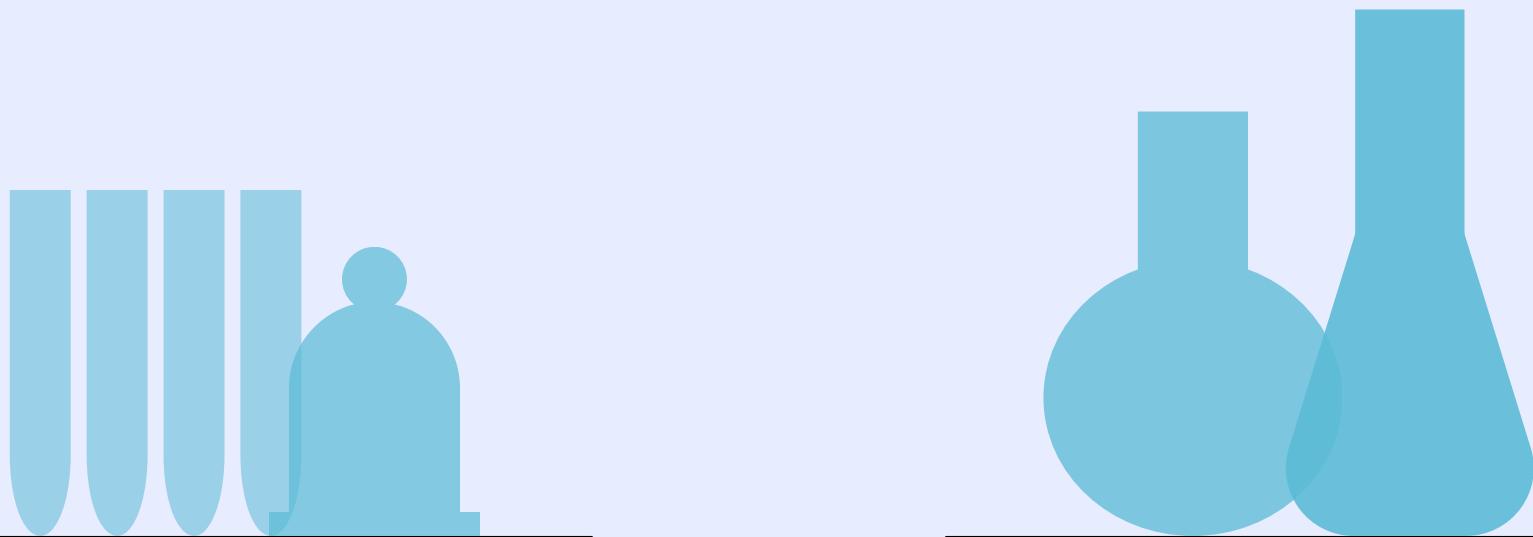
Title: \_\_\_\_\_

# chemistry

## Stoichiometry



How many moles of  $\text{CO}_2$  are produced from 5 moles of  $\text{CaCO}_3$ ?



### DEFINITION

- Stoichiometry studies the numerical relationships between reactants and products in chemical reactions using balanced equations.
- It follows the law of conservation of mass.
- Matter is not created or destroyed in a reaction.

### PURPOSE

- Balanced equations provide mole ratios, which are the foundation of all stoichiometric calculations.

Mass  $\rightarrow$  Moles  $\rightarrow$  Ratio  $\rightarrow$  Moles  $\rightarrow$  Mass

### APPLICATIONS

- Medicine production
- Food processing
- Engineering materials
- Environmental treatment

# CLUB ATTENDANCE

## Venue:

Date: .....

# Educational Tour

## Sign Up Sheet

# National Museum

# Math Worksheet

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Solve for  $x$ . Show your work. Convert fractions to decimals rounded to two places.

$$1) 3x + 5 - 2x + 7 = 20$$

Final Answer:

$$2) 4x - 3 + 2x + 9 = 30$$

Final Answer:

$$3) 6x + 4 - 3x - 10 = 5$$

Final Answer:

$$4) 5x - 8 + 2x + 6 = 27$$

Final Answer:

$$5) 7x + 3 - 4x + 9 = 24$$

Final Answer:

$$6) 2x + 6 - x + 10 = 25$$

Final Answer:

$$7) 9x - 5 + 3x + 1 = 37$$

Final Answer:

$$8) 8x + 4 - 2x + 12 = 40$$

Final Answer:

$$9) 10x - 6 + 2x - 8 = 46$$

Final Answer:

$$10) 3x + 9 - x + 11 = 36$$

Final Answer:

# Math Worksheet Answer Key

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Solve for  $x$ . Show your work. Convert fractions to decimals rounded to two places.

$$\begin{aligned} 1) 3x + 5 - 2x + 7 &= 20 \\ x + 12 &= 20 \\ x &= 8 \end{aligned}$$

Final Answer:  $x = 8$

$$\begin{aligned} 2) 4x - 3 + 2x + 9 &= 30 \\ 6x + 6 &= 30 \\ 6x &= 24 \\ x &= 4 \end{aligned}$$

Final Answer:  $x = 4$

$$\begin{aligned} 3) 6x + 4 - 3x - 10 &= 5 \\ 3x - 6 &= 5 \\ 3x &= 11 \\ x &= 11/3 \approx 3.67 \end{aligned}$$

Final Answer:  $x \approx 3.67$

$$\begin{aligned} 4) 5x - 8 + 2x + 6 &= 27 \\ 7x - 2 &= 27 \\ 7x &= 29 \\ x &= 29/7 \approx 4.14 \end{aligned}$$

Final Answer:  $x \approx 4.14$

$$\begin{aligned} 5) 7x + 3 - 4x + 9 &= 24 \\ 3x + 12 &= 24 \\ 3x &= 12 \\ x &= 4 \end{aligned}$$

Final Answer:  $x = 4$

$$\begin{aligned} 6) 2x + 6 - x + 10 &= 25 \\ x + 16 &= 25 \\ x &= 9 \end{aligned}$$

Final Answer:  $x = 9$

$$\begin{aligned} 7) 9x - 5 + 3x + 1 &= 37 \\ 12x - 4 &= 37 \\ 12x &= 41 \\ x &= 41/12 \approx 3.42 \end{aligned}$$

Final Answer:  $x \approx 3.42$

$$\begin{aligned} 8) 8x + 4 - 2x + 12 &= 40 \\ 6x + 16 &= 40 \\ 6x &= 24 \\ x &= 4 \end{aligned}$$

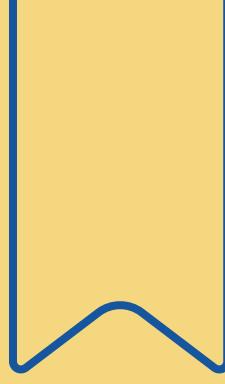
Final Answer:  $x = 4$

$$\begin{aligned} 9) 10x - 6 + 2x - 8 &= 46 \\ 12x - 14 &= 46 \\ 12x &= 60 \\ x &= 5 \end{aligned}$$

Final Answer:  $x = 5$

$$\begin{aligned} 10) 3x + 9 - x + 11 &= 36 \\ 2x + 20 &= 36 \\ 2x &= 16 \\ x &= 8 \end{aligned}$$

Final Answer:  $x = 8$



# Reading List

TITLE	AUTHOR	YEAR	NOTE

# STUDY SCHEDULE

DATE

## TOPIC