# **Converting Time**

## Introduction

- Time is measured in hours, minutes, and seconds.
- Conversion helps us express time in different units.

## **Key relationships:**

- $\circ$  1 hour = 60 minutes
- $\circ$  1 minute = 60 seconds
- For example, to convert 2 hours to minutes:
  - $\circ$  Multiply 2 by 60 (2 × 60 = 120 minutes).
- Similarly, converting minutes to hours or seconds to minutes often involves multiplication or division by 60.

## How to Convert Time Units:

- i. Hours to Minutes: Multiply by 60.
- ii. Minutes to Hours: Divide by 60.
- iii. Minutes to Seconds: Multiply by 60.
- iv. Seconds to Minutes: Divide by 60.
- v. **Combining Units:** Sometimes you need to combine units after converting. For example, if you have 1 hour 30 minutes, first convert the hour  $(1 \times 60 = 60 \text{ minutes})$ , then add the extra 30 minutes for a total of 90 minutes.

#### **Examples with Solutions:**

#### **Example:**

Problem: Convert 3 hours to minutes.

**Solution:** 3 × 60 = 180 minutes

Answer: 180 minutes

#### **Example:**

Problem: Convert 120 minutes to hours.

**Solution:** 120 ÷ 60 = 2 hours

#### Answer: 2 hours

#### **Example:**

Problem: Convert 5 minutes to seconds.

**Solution:** 5 × 60 = 300 seconds

Answer: 300 seconds

#### **Example:**

Problem: Convert 360 seconds to minutes.

Solution: 360 ÷ 60 = 6 minutes

Answer: 6 minutes

## Example:

Problem: Convert 1 hour 15 minutes to minutes.

**Solution:** Convert the hour: 1 × 60 = 60 minutes

Add the extra 15 minutes: 60 + 15 = 75 minutes

Answer: 75 minutes

## **Summary Points:**

- 1 hour = 60 minutes; 1 minute = 60 seconds.
- Multiply or divide by 60 for conversions.
- Practice converting back and forth between units for better understanding.
- Understand the relationships to solve problems quickly and correctly.