SCIENCE FOUNDATIONS

SI units and conversions

Difficulty level: Intermediate

Science Foundations

This document was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

Overview of the concept

This is how you make sure the numbers you plug into a physics calculation all use the same units, so a driving or building calculation gives an answer you can trust. A student who mixes kilometres per hour with metres per second in the same calculation gets an answer that looks precise and is completely wrong. An engineer converting a load from pounds to newtons before checking a beam avoids the same trap. Knowing SI units and conversions tells you how to line your units up before you calculate, so the answer comes out in units that mean something. SI units are the standard set of units used in science.



© 2026 Brett Robbins. All Rights Reserved.

Worked examples

EXAMPLE 1

Q Convert 72 km/h to $\frac{\text{m}}{\text{s}}$.

SOLUTION

Recall the conversion: divide km/h by 3.6 to get $\frac{\text{m}}{\text{s}}$.

Substitute:

$72 \div 3.6 = 20$ m/s

Write the answer with $\frac{\text{m}}{\text{s}}$.

The result is 20 m/s.

EXAMPLE 2

Q Convert 2500 g to kilograms.

SOLUTION

Recall: 1000 g is 1 kg.

Divide:

$2500 \div 1000 = 2.5$ kg

Write the answer with kg.

The result is 2.5 kg.

© 2026 Brett Robbins. All Rights Reserved.

Practice questions

1 SI unit of force?

- A Joule
- B Watt
- C Newton
- D Pascal

Understand It with Pulse | Flag a mistake

2 SI unit of energy?

- A Newton
- B Joule
- C Watt
- D Volt

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

3 SI unit of power?

- A Watt
- B Joule
- C Newton
- D Ohm

Understand It with Pulse | Flag a mistake

4 108 km/h to $\frac{\text{m}}{\text{s}}$?

Understand It with Pulse | Flag a mistake

5 Convert 20 m/s to km/h.

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

6

4000 g to kg?

Understand It with Pulse

Flag a mistake

7

5000 m to km?

Understand It with Pulse

Flag a mistake

8

Convert 3 km to metres.

Understand It with Pulse

Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

9

SI unit of mass?

A Gram

B Kilogram

C Newton

D Metre

Understand It with Pulse | Flag a mistake

10

SI unit of time?

A Minute

B Hour

C Second

D Day

Understand It with Pulse | Flag a mistake

© 2026 Brett Robbins. All Rights Reserved.

ANSWER KEY

1. Newton

2. Joule

3. Watt

4. 30 m/s

5. 72 km/h

6. 4 kg

7. 5 km

8. 3000 m

9. Kilogram

10. Second

© 2026 Brett Robbins. All Rights Reserved.