



# Summer Learning Journey for Maths

## Year 7H Unit 10 Equations



### How does this unit link to prior learning?

- Use times tables to solve problems
- Know how to work with the perimeter of a shape
- Know how to find the area of a square

### Prior Knowledge Check

1. Filling in the missing numbers to make the calculations correct:

a)  $4 \times \underline{\quad} = 28$    b)  $21 \div \underline{\quad} = 3$    c)  $10 - \underline{\quad} = 4$

2. Here is a square with perimeter 48cm.

a) Find the side length of the square.



Perimeter =  
48cm

b) Hence or otherwise, find the area of the square.

### What will you be learning about?

Solve one-step equations  
Write and solve two-step equations  
Solve equations where the unknown appears on both sides

### We will develop our learning each week by focusing on:

1. Solving one-step equations	RAG	2. Solving two-step equations	RAG
<ul style="list-style-type: none"> <li>• Write and solve simple equations.</li> <li>• Solve problems using equations.</li> </ul>		<ul style="list-style-type: none"> <li>• Write and solve two-step equations.</li> <li>• Write and solve equations that have brackets.</li> </ul>	
<b>3. More complex equations</b> <ul style="list-style-type: none"> <li>• Write and solve equations with letters on both sides.</li> </ul>		<b>4. Trial and improvement</b> <ul style="list-style-type: none"> <li>• Solve equations that include <math>x^2</math> and <math>x^3</math></li> <li>• Use trial and improvement to find solutions to 1 decimal place.</li> </ul>	
<b>5. Revision Lesson</b> <ul style="list-style-type: none"> <li>• Select topics you feel the class need to revise.</li> <li>• Classroom based or Mathswatch.</li> </ul>		<b>6. Assessment Lesson</b> <ul style="list-style-type: none"> <li>• Do 10-minute top up and go through answers together, students self-assess.</li> <li>• Open book assessment done in silence.</li> </ul>	
<b>7. Feedback Lesson</b> <ul style="list-style-type: none"> <li>• Student to highlight their traffic light sheet.</li> <li>• Teacher to go through test and students to self-assess in green.</li> <li>• Students to complete the NOW section of the WOW-HOW-NOW sheet.</li> </ul>			

### Key Vocabulary

Equations	Inverse	Opposite	Operation	Term	Solve	Unknown	Satisfy
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## How will this help you in the future?

### KS4

#### Solving One-Step Equations

- Forms the **foundation of algebra**, which is a major part of GCSE.
- Needed for solving more complex equations later on.
- Appears in **basic problem-solving questions** in exams.

#### Solving Two-Step Equations

- A key GCSE skill that builds on one-step equations.
- Needed for solving **equations with brackets and multiple steps**.
- Links directly to **algebraic problem-solving questions**.

#### More Complex Equations

- Solving equations with letters on both sides is a **core GCSE topic**.
- Often appears in **higher-mark problem-solving questions**.
- Links to **rearranging formulae and algebraic reasoning**.

#### Trial and Improvement

- Used to solve equations that can't be rearranged easily (especially with powers like  $x^2$ ).
- A key method for **higher-tier GCSE questions**.
- Links to **estimation, accuracy, and iterative methods**.

### Beyond LHS

#### Solving One-Step Equations

- Helps with **working out unknown values** (e.g. costs, time, distances).
- Used in everyday situations like **budgeting and shopping**.
- Important in jobs involving **calculations and problem solving** (e.g. business, finance).

#### Solving Two-Step Equations

- Used when solving **real-life problems with multiple steps**.
- Important in **engineering and science** calculations.
- Helps develop logical thinking needed in **many careers**.

#### More Complex Equations

- Used in **science formulas** (e.g. physics and chemistry equations).
- Important in **engineering and computing**.
- Helps with **analysing and modelling real-life situations**.

#### Trial and Improvement

- Used in **real-world problem solving** when exact answers aren't obvious.
- Important in **engineering, design, and computing** (testing and refining solutions).
- Helps in careers that involve **modelling and predicting outcomes**.