



Maths

Addition and Subtraction

Need a coherently planned sequence of lessons to complement this resource?

Lesson Breakdown

Below is our suggestion for the most coherent and progressive sequence to teach this area of PlanIt Maths steps on the White Rose Maths scheme of learning although we have not aimed to mirror the exact order in which the resources are presented.

Recall and Use Facts (1): Number Facts up to 10

This computer game themed lesson is designed to help children secure their understanding of number facts. Children use a range of methods to investigate and check if they are correct. Differentiated activity sheets and mastery cards to help children.

NC Statement: Recall and use facts to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 10.

Recall and Use Facts (2): Number Facts up to 20

This lesson teaches children to use familiar number facts to solve and create problems. Children are encouraged to use different representations to support their learning. Differentiated activity sheets and mastery cards to help children develop fluency.

NC Statement: Recall and use facts to 20 fluently and derive and use related facts up to 100.

Lesson Aim: To recall and use number facts up to 20.

Solve Problems (1): Using Different Representations to Solve Problems

Children learn to solve addition and subtraction problems using concrete objects and pictorial representations, including those involving numbers, mass and measures, applying their increasing knowledge of mental and written methods. This lesson includes Diving into Mastery activity cards with fluency resources.

NC Statement: Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, mass and measures, applying their increasing knowledge of mental and written methods.

Lesson Aim: To solve addition and subtraction problems using objects, pictures and models.

Introduction

In this unit, children will learn to recall and use addition and subtraction facts. They use a variety of different models, images and equipment to build their number sense, enabling them to use facts flexibly. They learn different strategies to help them add and subtract numbers efficiently, explaining their methods with concrete resources or jottings. Methods include: adding a unit to a ten, adding three single-digit numbers and adding and subtracting multiples of ten leading to pairs of two-digit numbers. They find the difference between numbers and reason about when it is quicker to find the difference or take away. They build up their understanding of commutativity and inverse relationships, using these to solve increasingly complex missing number problems. They apply their learning to problem-solving, and are able to ask questions, explain their choices and demonstrate their methods.

Resources

In addition to your standard maths resources, you will need:

- digital cameras

Assessment Statements

By the end of this unit;

children working towards the expected level will be able to:

- recall and use at least four out of six number facts to ten and derive their associated subtraction facts;
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required;
- explain their addition and subtraction methods verbally, in pictures or using apparatus;
- understand that two numbers can be added in any order and the answer will be the same.

children working at the expected level will be able to:

- recall number facts to add and within ten and subtraction facts. Use these to derive number and within 20 and 100;
- add and subtract within 100: a two-digit number and ones, a two-digit number and tens, two two-digit numbers;
- add three one digit numbers using efficient methods;
- understand that addition is commutative but subtraction is not, and explain what this means;
- use the inverse relationship between addition and subtraction to solve problems and check their calculations;
- solve addition and subtraction problems in context of quantities and measures, using pictures and mentally.

Addition and Subtraction

Maths | Year 2 | Steps to Progression Overview

The aim of this overview is to support teachers using PlanIt Maths to show the most coherent and progressive sequence to teach each area of maths. We also want to fully support teachers who use the White Rose Maths scheme of learning to make full use of the resources available within PlanIt Maths. Whenever possible, lesson packs have been matched to each of the small steps on the White Rose Maths scheme of learning.

Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value	Number: Addition and Subtraction						Measurement: Money	Number: Multiplication and Division			
Spring	Number: Multiplication and Division	Statistics	Geometry: Properties of Shape				Number: Fractions	Measurement: Length and Height	Consolidation			
Summer	Position and Direction	Problem Solving and Efficient Methods		Measurement: Time	Measurement: Mass, Capacity and Temperature			Investigations				

See our [Addition and Subtraction Steps to Progression](#) document.

Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.



Add Two 2-Digit Numbers, Crossing Ten



Aim

- To add two 2-digit numbers by adding the ones (crossing 10) and the tens.

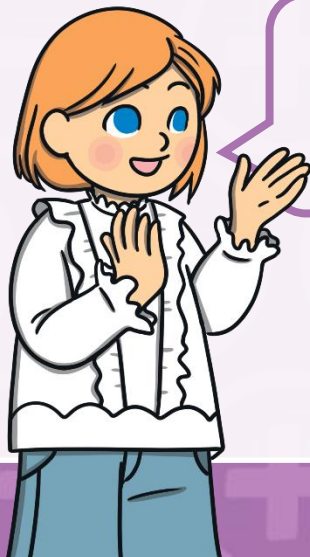
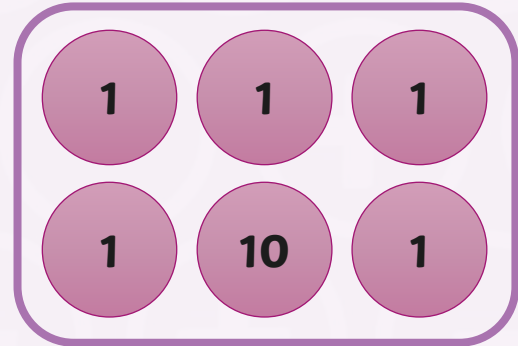
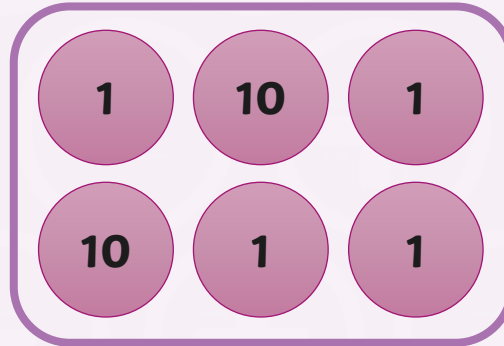
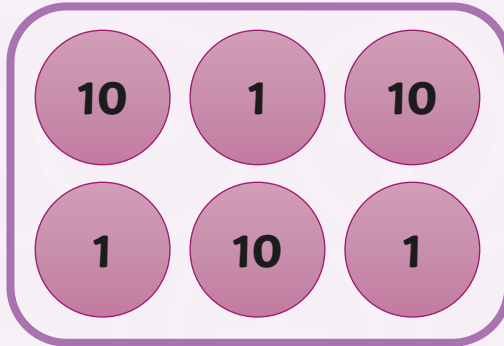
Success Criteria

- I can use place value grids to add two 2-digit numbers, crossing ten.
- I can use part-whole models to add two 2-digit numbers, crossing ten.

Remember It



Can you match the numbers with the groups of place value counters?



What would
have made
this easier?

33

Can you
explain why?



Remember It



Now the tens and ones have their own columns.
Is it easier to match them with the numbers?

Tens	Ones
10 10	1 1 1 1 1

Tens	Ones
10 10 10	1 1 1 1

Tens	Ones
10	1 1 1

34

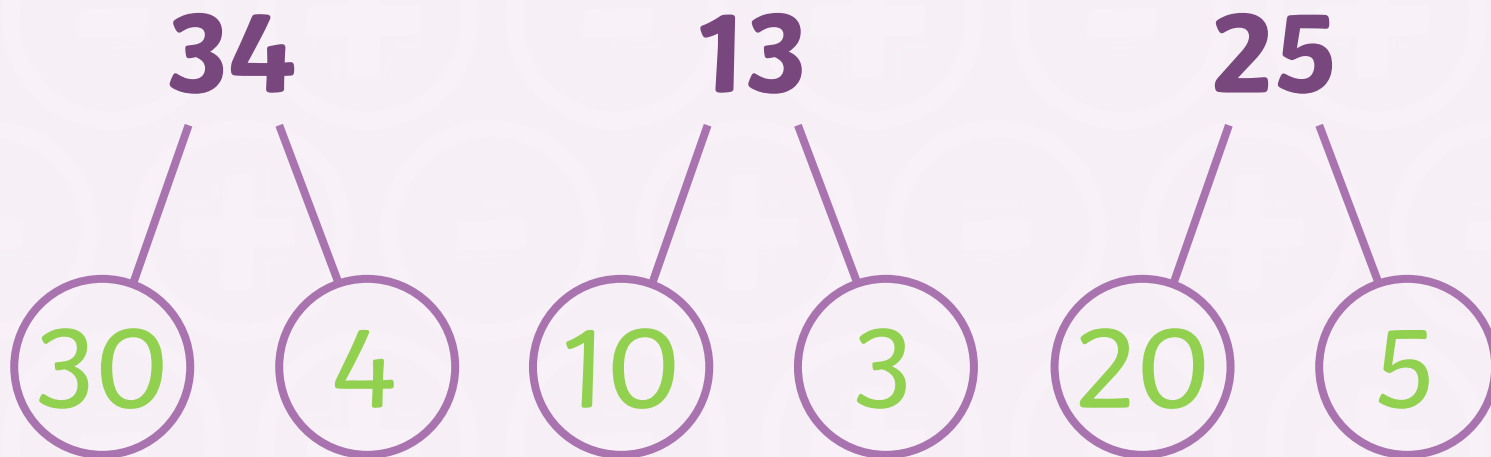
Can you explain why?



Remember It



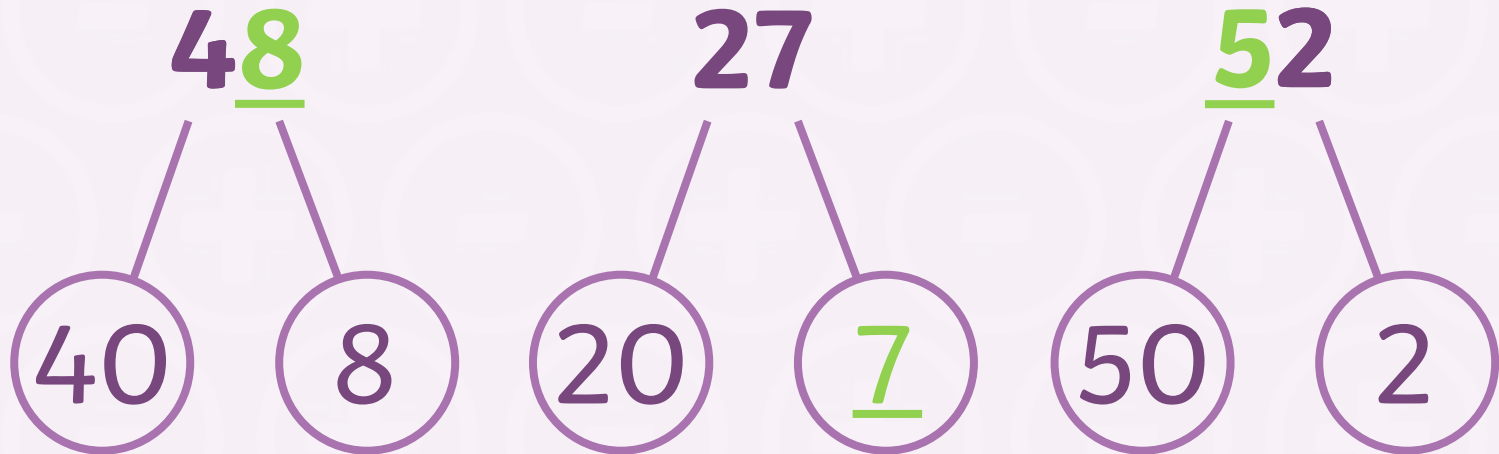
Can you use tens and ones to complete the part-whole models?



Remember It



Can you complete the part-whole models?



Partitioning numbers into tens and ones
will help us with today's challenges.

High Score



Find out by adding their individual scores.

High Score



Anna used a place value grid to find the total.

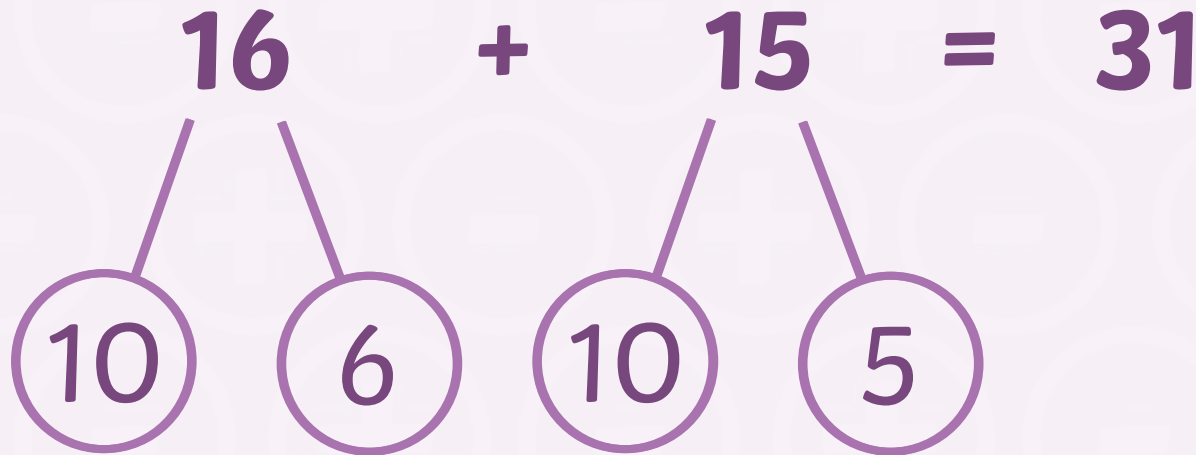
Tens	Ones
10	1 1 1 1 1 1
10	1 1 1 1 1

$16 + 15 = 31$
 $10 + 10 = 20$
 $6 + 5 = 11$
 $20 + 11 = 31$

High Score



Felix used part-whole models to find the total.



$$10 + 10 = 20$$

$$6 + 5 = 11$$

$$20 + 11 = 31$$



High Score

Let's try some more.



Will you use place value counters or part-whole models?

High Score



Anna used a place value grid to find the total.

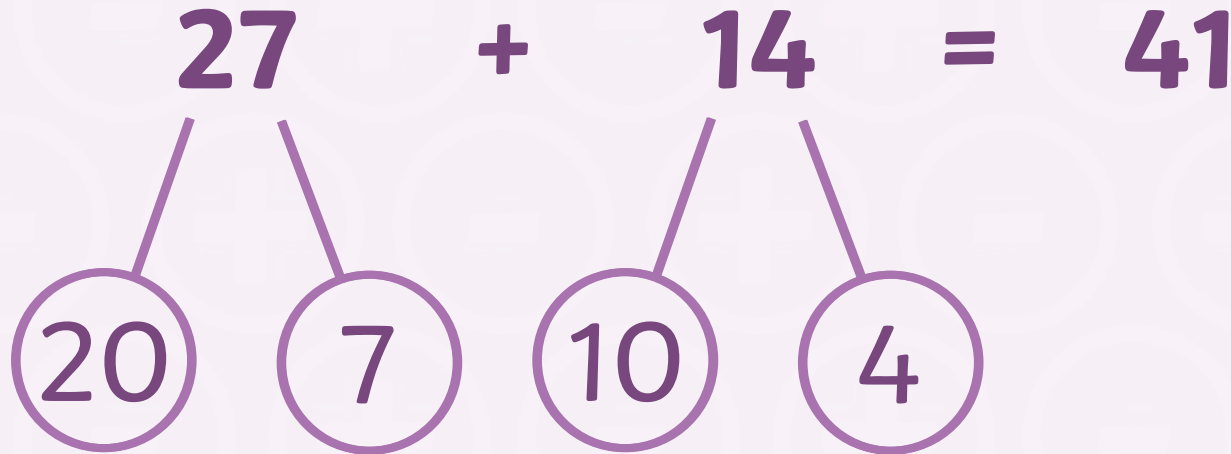
Tens	Ones
10 10	1 1 1 1 1 1 1
10	1 1 1 1

$27 + 14 = 31$
 $20 + 10 = 30$
 $7 + 4 = 11$
 $30 + 11 = 41$

High Score



Felix used part-whole models to find the total.



$$20 + 10 = 30$$

$$7 + 4 = 11$$

$$30 + 11 = 41$$



High Score



Use place value columns or part-whole models to find the total.

Anna		Scoreboard					24		Felix	
10	1	1	1	1		10	1	1		
10	1	1	1	1		10	1	1		

Which do you prefer?
Can you explain why?

High Score



Anna used a place value grid to find the total.

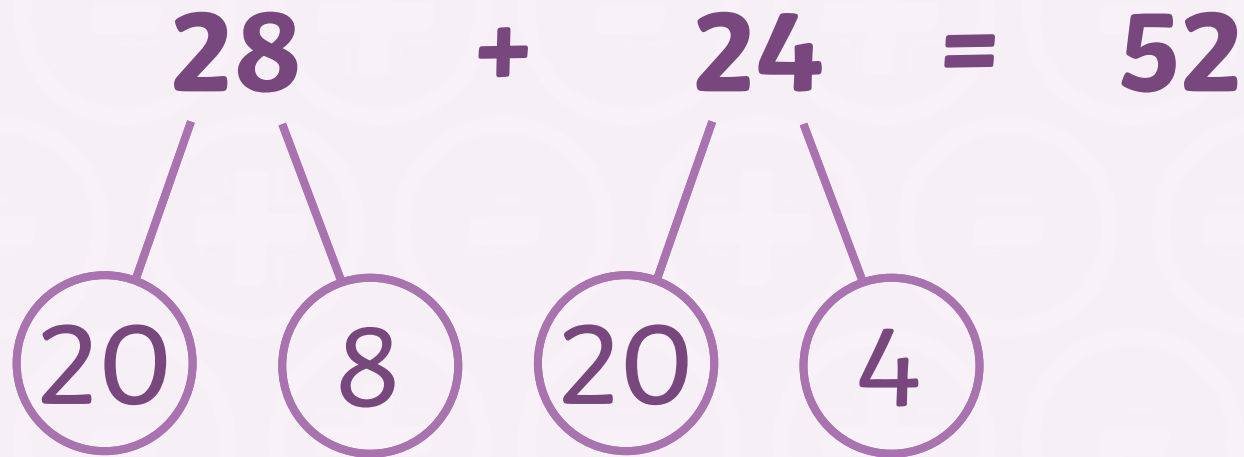
Tens	Ones
10 10	1 1 1 1
	1 1 1 1
10 10	1 1 1 1

$28 + 24 = 52$
 $20 + 20 = 40$
 $8 + 4 = 12$
 $40 + 12 = 52$

High Score



Felix used part-whole models to find the total.



$$20 + 20 = 40$$

$$8 + 4 = 12$$

$$40 + 12 = 52$$



High Score Activity



High Score

To add two 2-digit numbers by adding the ones (crossing 10) and the tens.

Add the scores to find the total

1.

$$16 + 15 = \square$$

$$10 + 10 = \square$$

$$6 + 5 = \square$$

$$\square + \square = \square$$

Tens	Ones
10	1 1 1
10	1 1 1
	1 1

2.

$$\begin{array}{c} 17 \\ 10 \quad 7 \end{array} + \begin{array}{c} 16 \\ 10 \quad 6 \end{array} = \square$$

$$10 + 10 = \square$$

$$7 + 6 = \square$$

$$\square + \square = \square$$

3.

$$18 + 25 = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

Tens	Ones
10	1 1 1 1
10 10	1 1 1 1
	1

4.

$$\begin{array}{c} 27 \\ 20 \quad 7 \end{array} + \begin{array}{c} 26 \\ 20 \quad 6 \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

High Score

Numbers by adding the ones (crossing 10) and the tens.

find the total

$$\square$$

$$= \square$$

$$= \square$$

$$= \square$$

Tens	Ones
10 10	1 1 1 1
10	1 1 1 1
	1

$$+ \begin{array}{c} 26 \\ 20 \quad 6 \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square$$

$$= \square$$

$$= \square$$

$$= \square$$

Tens	Ones

$$+ \begin{array}{c} 25 \\ \square \quad \square \end{array} = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

High Score

adding the ones (crossing 10) and the tens.

the total. Use a place value grid or part-whole

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Diving into Mastery

Dive in by completing your own activity!



Add Two 2-Digit Numbers, Crossing Ten.



Complete the calculations.

$27 + 26 = \square$

$20 + 20 = \square$

$6 + 7 = \square$

$\square + \square = \square$

Tens	Ones
10 10	1 1 1 1 1 1
10 10	1 1 1 1 1 1 1

$18 + 17 = \square$



$\square + \square = \square$

$\square + \square = \square$

$\square + \square = \square$



Now pick your favourite method to complete the following:

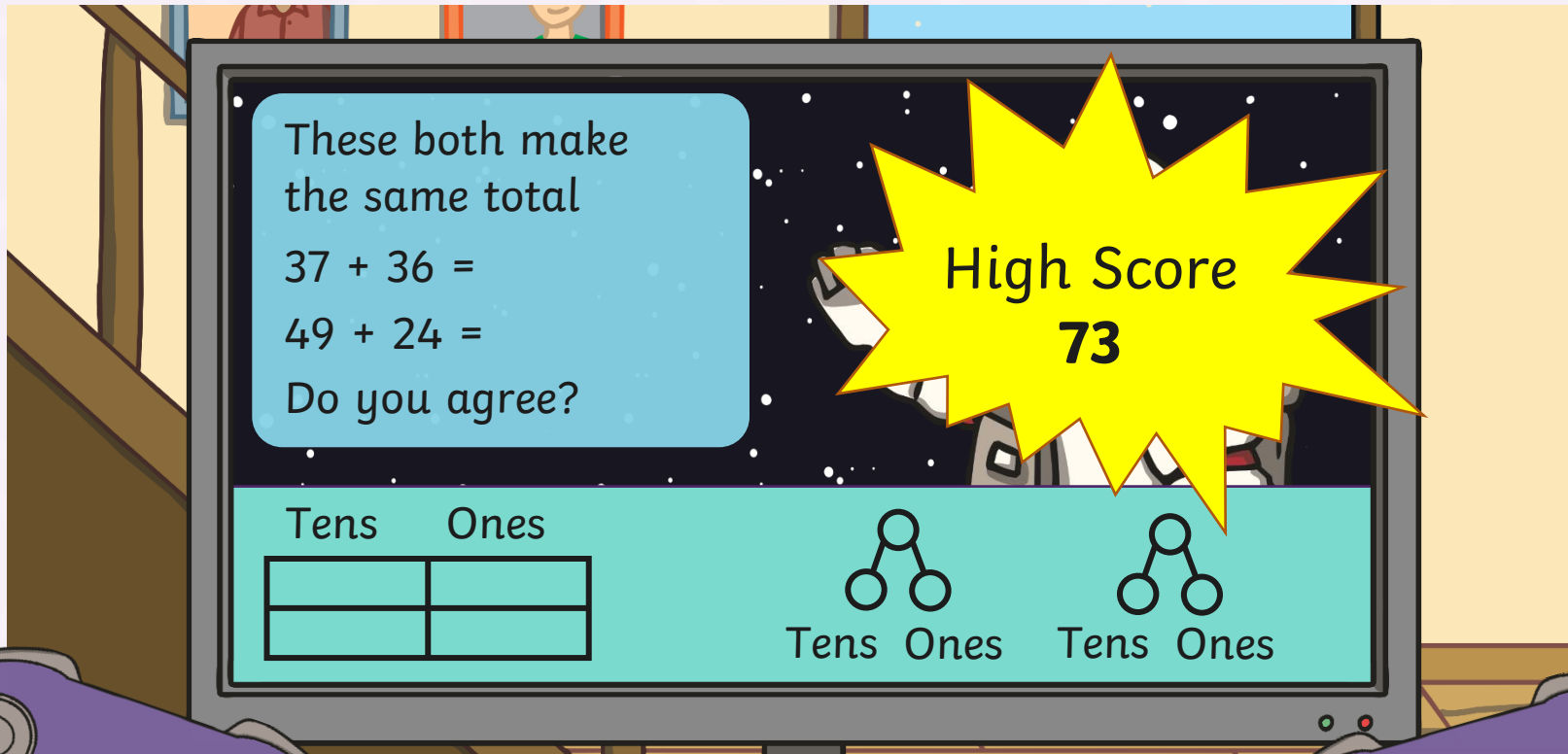
$32 + 49 = \square$

$45 + 29 = \square$

Check It



Use place value columns or part-whole models to find the total.



Use place value grids or part-whole models to prove it.

Aim



- I can add and subtract a multiple of 10 to and from any 2-digit number.

Success Criteria

- I can use place value grids to add two 2-digit numbers, crossing ten.
- I can use part-whole models to add two 2-digit numbers, crossing ten.

