



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 they 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. They use different representations to support their learning. This lesson includes Diving into Mastery activity cards with fluency resources.

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. This lesson includes Diving into Mastery activity cards with fluency resources.

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, quantities 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, quantities 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 Three 1-Digit Numbers



Aim

- To add three 1-digit numbers.

Success Criteria

- I can use number facts to add three 1-digit numbers.
- I can use number doubles to add three 1-digit numbers.
- I can select a strategy to add three 1-digit numbers.

Remember It



Minute to win it.

Your time...

starts...

NOW!

Add 2 numbers to make
the mystery total.
Can you find all
the possibilities?

7



Remember It



Did you find all the possibilities?

Using a number pattern can help.

$$0 + 7$$

$$1 + 6$$

$$2 + 5$$

$$3 + 4$$



$$7 + 0$$

$$6 + 1$$

$$5 + 2$$

$$4 + 3$$

Remember It



Minute to win it.

Your time...

starts...

NOW!

How many number pairs can you find to make the mystery number?

9



Remember It



How will you know if you've found all the possibilities?

Did you use a number pattern to check?

$0 + 9$

$1 + 8$

$2 + 7$

$3 + 6$

$4 + 5$



$9 + 0$

$8 + 1$

$7 + 2$

$6 + 3$

$5 + 4$

Remember It



Can you find the pairs of numbers that add together to make 10?

A whiteboard with a red border and a wooden base. On the whiteboard, there is a grid of 12 yellow stars arranged in 3 rows and 4 columns. The numbers in the stars are as follows:

| | | | |
|---|---|----|---|
| 7 | 0 | 10 | 6 |
| 3 | 1 | 5 | 4 |
| 9 | 2 | 8 | 5 |

Four purple lines connect the following pairs of stars:

- 0 and 10 (top row, middle two)
- 1 and 9 (middle row, second from left and bottom left)
- 5 and 5 (middle row, third from left and bottom right)
- 2 and 8 (bottom row, second from left and third from left)

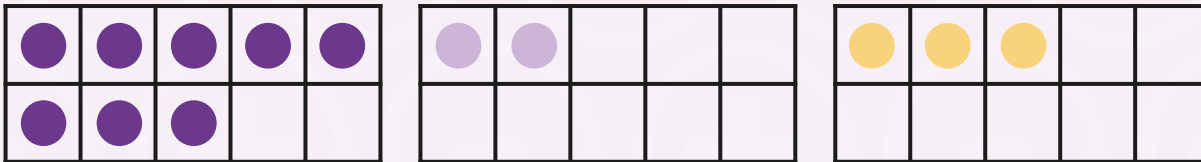
Spot It



Facts of ten can help us add three 1-digit numbers.

Can you spot a number fact of 10 in this calculation?

Make 10 then add the remaining number.



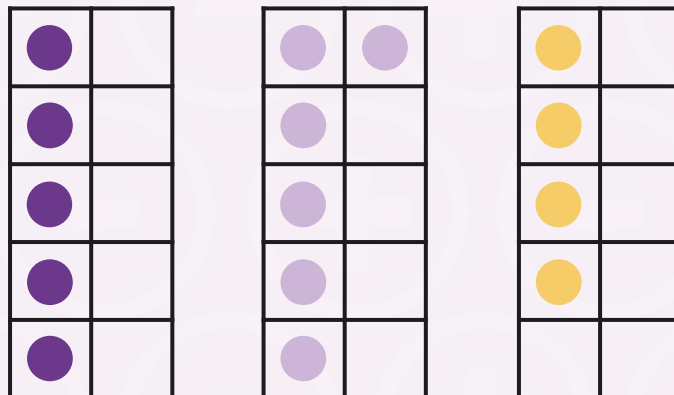
$$8 + 2 + 3 = 13$$

$$10 + 3 = 13$$

Spot It



Make a number fact of ten then add the remaining number.



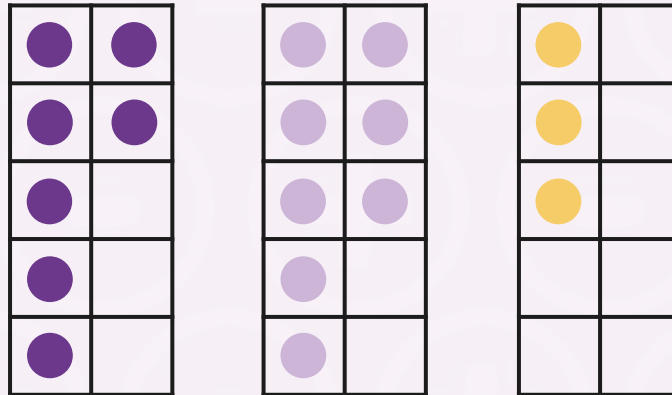
$$5 + 6 + 4 = 15$$

$$5 + 10 = 15$$

Spot It



Make a number fact of ten then add the remaining number.



$$7 + 8 + 3 = 18$$

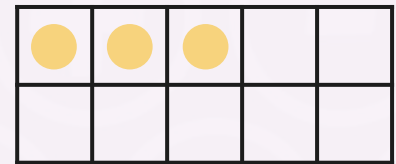
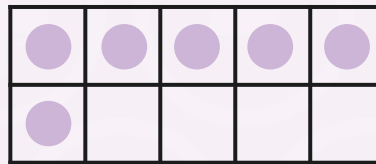
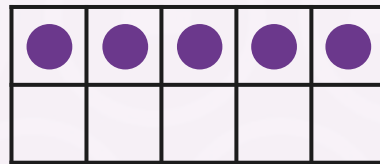
$$10 + 8 = 18$$

Make It



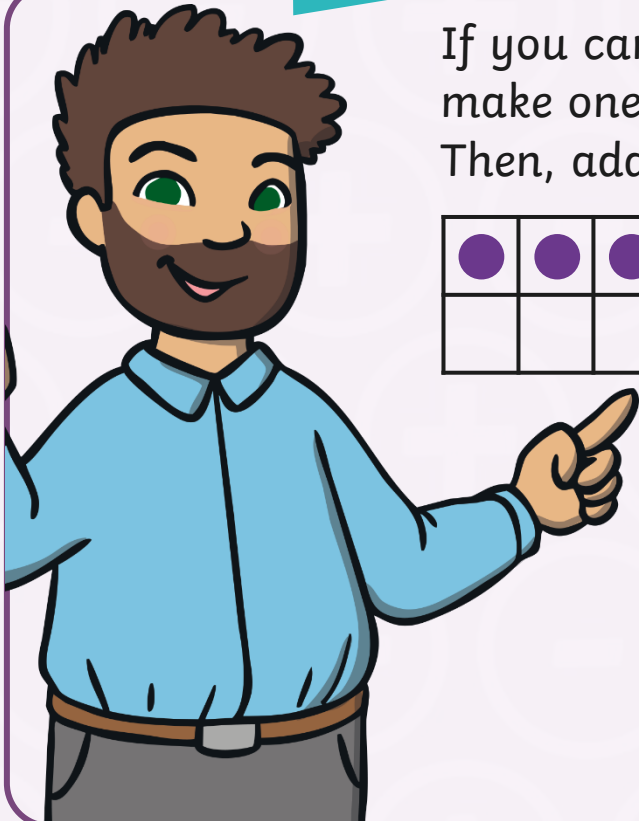
But what if I can't find a number fact of ten?

If you can't see a number fact of ten, you can make one by partitioning a number like this. Then, add the remaining parts.



$$5 + 6 + 3 = 14$$

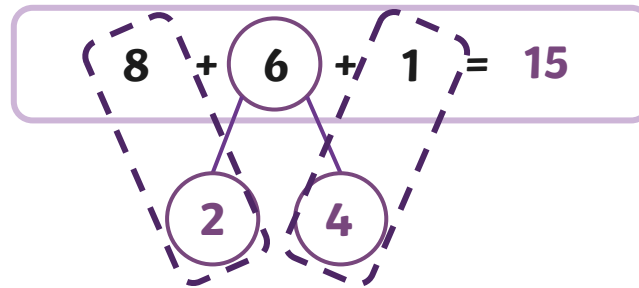
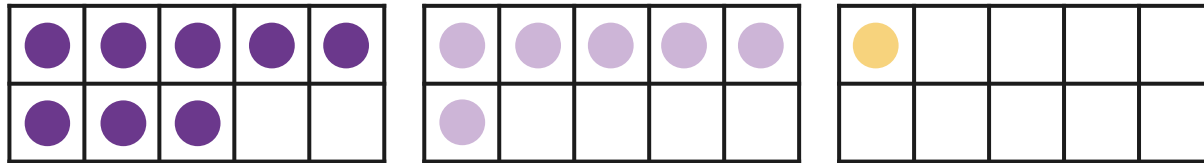
$$10 + 4 = 14$$



Make It



Partition a number to make a number fact of ten.
Then, add the remaining numbers.



$$10 + 5 = 15$$



Double It



Can you remember these number doubles?

The scene is an underwater environment with a mermaid at the bottom. The mermaid has red hair, a yellow starfish on her forehead, and a green top. She is pointing upwards towards a bubble containing the number 16. The background is a teal gradient with light rays. Numerous bubbles of different sizes float around, each containing a number. The bubbles are arranged in a grid-like pattern, with the numbers in each bubble representing a number double. The numbers are: 1, 2, 2, 4, 4, 3, 6, 4, 8, 5, 10, 6, 12, 7, 8, 8, 16, 9, 18, 10, 20.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|----|---|----|----|----|---|----|
| 1 | 2 | 2 | 4 | 4 | 3 | 6 | 4 | 8 | 5 | 10 | 6 | 12 |
| | | | 7 | 8 | 8 | 16 | 9 | 18 | 10 | 20 | | |

Double It



Some number doubles can be tricky to recall.

Can you spot any patterns that could help?

$$1 + 1 = 2$$

$$2 + 2 = 4$$

$$3 + 3 = 6$$

$$4 + 4 = 8$$

$$5 + 5 = 10$$

$$6 + 6 = 12$$

$$7 + 7 = 14$$

$$8 + 8 = 16$$

$$9 + 9 = 18$$

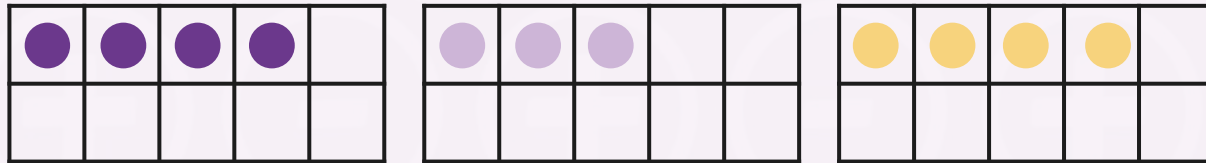
$$10 + 10 = 20$$

Double It



Can you spot a number double in this calculation?

Use the number double then add the remaining number.



$$4 + 3 + 4 = 11$$

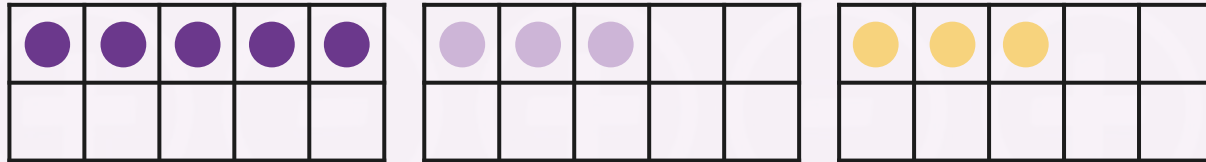
$$8 + 3 = 11$$

Double It



Use the number doubles then add the remaining numbers.

Click to reveal the solution.



$$5 + 3 + 3 = 11$$

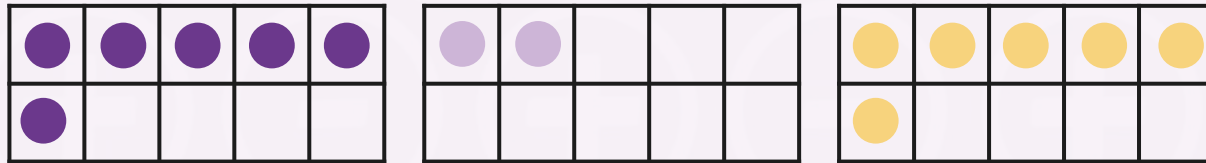
$$5 + 6 = 11$$

Double It



Use the number doubles then add the remaining numbers.

Click to reveal the solution.



$$6 + 2 + 6 = 14$$

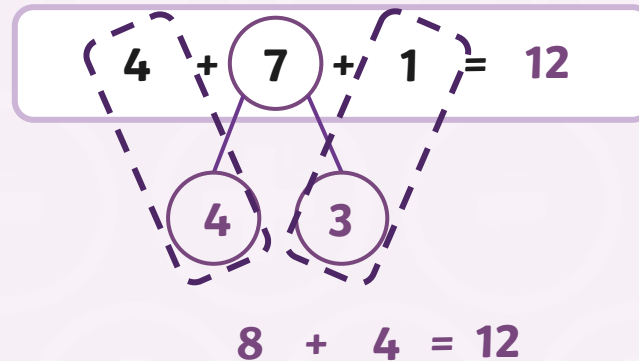
$$12 + 2 = 14$$

Make It



But what if I can't find a number double?

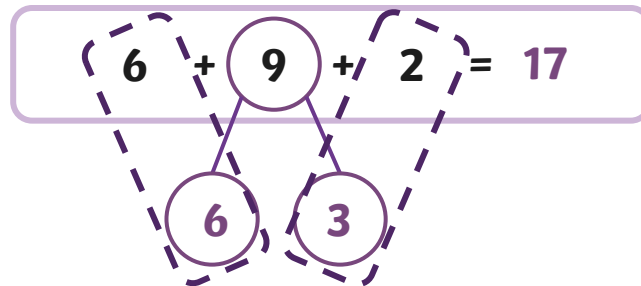
If you can't see a number double, you can make one by partitioning a number like this.



Make It



Partition a number to make a number double.
Then, add the remaining numbers.



$$12 + 5 = 17$$



Try It



Which strategy will you choose to solve each calculation?
Can you explain why you chose that strategy?

Doubles

$$3 + 2 + 3 = 8$$

$$6 + 2 = 8$$

Facts of ten

$$6 + 4 + 2 = 12$$

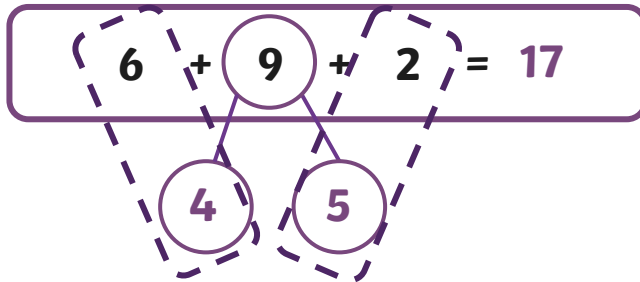
$$10 + 2 = 12$$

Try It



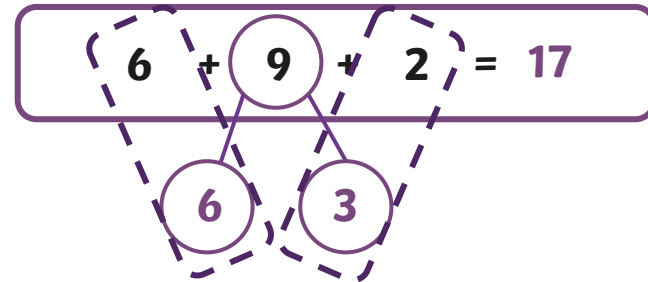
Which strategy will you choose to solve each calculation?
Can you explain why you chose that strategy?

Facts of ten



$$10 + 7 = 17$$

Doubles



$$12 + 5 = 17$$

Three Numbers Activity



Add Three 1-Digit Numbers

To add three 1-digit numbers.

Find a number fact of ten. Then add the other number.

$$\begin{array}{l} 1 + 9 + 3 = \square \\ 10 + \square = \square \end{array}$$

$$\begin{array}{l} 5 + 6 + 5 = \square \\ 10 + \square = \square \end{array}$$

$4 + 7 + 3 = \square$

$6 + 4 + 8 = \square$

Find a number double and then add the other number.

$$\begin{array}{l} 3 + 3 + 4 = \square \\ \square + \square = \square \end{array}$$

$$\begin{array}{l} 3 + 3 + 4 = \square \\ \square + \square = \square \end{array}$$

$4 + 7 + 4 = \square$

$8 + 8 + 1 = \square$

Find a number fact of ten. Then add the other number.

$4 + 7 + 7 = \square$

$8 + 2 + 5 = \square$

$6 + 9 + 4 = \square$

$9 + 9 + 2 = \square$



Maths: Addition and Subtraction | Addition and Subtraction Strategies | Lesson 12 of 12: Add Three 1-Digit Numbers

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Add Three 1-Digit Numbers

numbers.

fact of ten and then add the other number.

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 7 + 6 + 4 = \square \\ \square \end{array}$$

fact of ten and then add the other numbers.

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 8 + 5 + 6 = \square \\ \square \end{array}$$

fact of ten and then add the other number.

$$\begin{array}{l} 8 = \square \\ \square \end{array}$$

$$\begin{array}{l} 5 + 7 + 7 = \square \\ \square \end{array}$$

double and then numbers.

$$\begin{array}{l} 3 = \square \\ \square \end{array}$$

$$\begin{array}{l} 7 + 5 + 4 = \square \\ \square \end{array}$$

$$\begin{array}{l} 5 = \square \\ \square \end{array}$$

$$\begin{array}{l} 4 + 7 + 8 = \square \\ \square \end{array}$$

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Three 1-Digit Numbers

numbers.

and discuss the best ways to add these numbers.

number facts of ten or doubles?

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 5 + 8 + 2 = \square \\ \square \end{array}$$

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 2 + 6 + 5 = \square \\ \square \end{array}$$

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 3 + 8 + 8 = \square \\ \square \end{array}$$

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} + 3 = \square \\ \square \end{array}$$

$$\begin{array}{l} \square \\ \square \end{array}$$

$$\begin{array}{l} 5 + 9 + 4 = \square \\ \square \end{array}$$

$$\begin{array}{l} + 4 = \square \\ \square \end{array}$$

$$\begin{array}{l} 7 + 8 + 5 = \square \\ \square \end{array}$$

Maths: Addition and Subtraction | Addition and Subtraction Strategies | Lesson 12 of 12: Add Three 1-Digit Numbers

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Diving into Mastery

Dive in by completing your own activity!



Add Three 1-Digit Numbers

Add each set of 3 numbers.
Circle number facts of ten or number doubles to help you.

| | |
|-----------------------|-----------------------|
| $2 + 4 + 8 = \square$ | $3 + 3 + 6 = \square$ |
| $6 + 1 + 9 = \square$ | $5 + 0 + 5 = \square$ |
| $9 + 4 + 4 = \square$ | $7 + 3 + 2 = \square$ |
| $6 + 8 + 6 = \square$ | $2 + 8 + 8 = \square$ |
| $0 + 4 + 6 = \square$ | $7 + 5 + 7 = \square$ |

15

5

3

side.

4

How Many Ways



11

Add 3 numbers to make 11. How many different ways can you find?



Hint! Keep a number in the same place for as long as you can.

$$0 + 2 + 9$$

$$0 + 3 + 8$$

$$0 + 4 + 7$$

$$0 + 5 + 6$$

$$1 + 1 + 9$$

$$1 + 2 + 8$$

$$1 + 3 + 7$$

$$1 + 4 + 6$$

$$1 + 5 + 5$$

$0 + 2 + 9$
is the same as
 $9 + 2 + 0$.



Aim



- To add three 1-digit numbers.

Success Criteria

- I can use number facts to add three 1-digit numbers.
- I can use number doubles to add three 1-digit numbers.
- I can select a strategy to add three 1-digit numbers.

