1s, 10s, 100s, 1,000s

Notes and Guidance

Children build on prior learning of adding and subtracting hundreds, tens and ones. They are introduced to adding and subtracting thousands.

Children should use concrete representations (Base 10, place value counters etc.) before moving to abstract and mental methods.

Mathematical Talk

Can you represent the numbers using Base 10 and place value counters? What's the same about the representations? What's different?

If we are adding tens, are the digits in the tens column the only ones that change? Do the ones/hundreds/thousands ever change?

Varied Fluency

The number being represented is ____.

Add 3 thousands to the number. What do you have now?

Add 3 hundreds to the number. What do you have now?

Subtract 3 tens from the number. What do you have now?

Add 5 ones to the number. What do you have now?

Here is a number.

Thousands	Hundreds	Tens	Ones
5	3	8	2

Add 3 thousands to the number.
Subtract 4 thousands from the answer.
Subtract 2 ones.
Add 5 tens.
What number do you have now?

Which questions are easy?
Which questions are hard?

$$8{,}273 + 4 = \underline{}$$

$$8{,}273 + 4 \text{ tens} = \underline{}$$

$$8{,}273 - 500 = \underline{}$$

$$8{,}273 - 5 \text{ thousands} = \underline{}$$

Why are some easier than others?

Mo says,

When I add hundreds to a number, only the hundreds column will change.

Is Mo correct? Explain your answer.

Add Two 4-digit Numbers (1)

Notes and Guidance

Children use their understanding of addition of 3-digit numbers to add two 4-digit numbers with no exchange.

They use concrete equipment and a place value grid to support their understanding alongside column addition.

Mathematical Talk

How many ones are there altogether? Can we make an exchange? Why? (Repeat questions for other columns)

Is it more difficult to add 3-digit or 4-digit numbers without exchanging? Why?

How can you find the missing numbers? Do you need to add or subtract?

Varied Fluency

◼ Use counters and a place value grid to calculate $242 + 213$

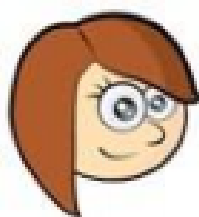◼ Use counters and a place value grid to calculate $3,242 + 2,213$

1,000s	100s	10s	1s
1000 1000 1000	100 100	10 10 10 10	1 1
1000 1000	100 100	10	1 1 1

Now calculate $3,242 + 213$ in the same way.
What is the same and what is different?

◼ Work out the missing numbers.

	Th	H	T	O
	4	__	6	__
+	2	5	__	1
	__	7	8	9

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Reasoning and Problem Solving

Rosie adds 2 numbers together that total 4,444

Both numbers have 4 digits.

All the digits in both numbers are even.

What could the numbers be?

Prove it.

How many ways can you find?

Two children completed the following calculation:

$$1,234 + 345$$

Dora: My answer is 1,589

Alex: My answer is 4,684

Both of the children have made a mistake in their calculations.

Calculate the actual answer to the question.

What mistakes did they make?

Add Two 4-digit Numbers (2)

Notes and Guidance

Children add two 4-digit numbers with one exchange. They use a place value grid to support understanding alongside column addition.

They explore exchanges as they occur in different place value columns and look for similarities/differences.

Mathematical Talk

How many ones do we have altogether? Can we make an exchange? Why? How many ones do we exchange for one ten? Do we have any ones remaining? (Repeat for other columns.)

Why is it important to line up the digits in the correct column when adding numbers with different amounts of digits?

Which columns are affected if there are more than ten tens altogether?

Varied Fluency

Rosie uses counters to find the total of 3,356 and 2,435

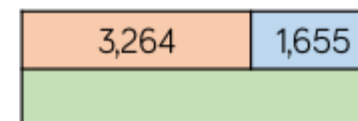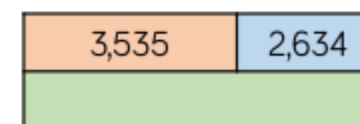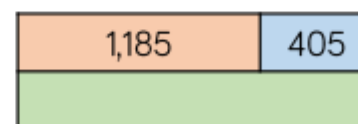|	Th	H	T	O
		3	3	5	6
+		2	4	3	5
		5	7	9	1

Use Rosie's method to calculate:

3,356 + 2,437   3,356 + 2,473   3,356 + 2,743

Dexter buys a laptop costing £1,265 and a mobile phone costing £492
How much do the laptop and the mobile phone cost altogether?

Complete the bar models.

1,185	405
3,535	2,634
3,264	1,655

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What is the missing 4-digit number?

	Th	H	T	O
	—	—	—	—
+	6	3	9	5
	8	9	4	9