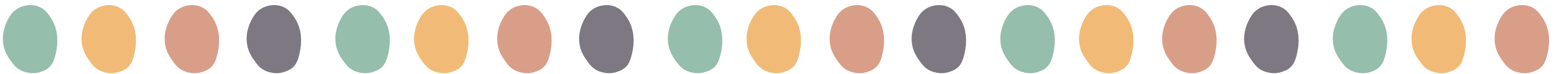


Y3- Overview

	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2			3	4	5	6	7	8		9	10	11

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Spring 1	Informal and mental strategies for adding and subtracting two 3-digit numbers (2 weeks)
Ready to progress	3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction
NCETM documents	TEACHING POINT 1,2 AND 3 1.19 Securing mental strategies: calculation up to 999 https://www.ncetm.org.uk/classroom-resources/primm-119-securing-mental-strategies-calculation-up-to-999/
Small steps	To add two 3-digit numbers using partitioning. To adjust a number to make addition easier. To add 2 digit and 3 digit numbers by redistributing. To choose the most efficient strategy to add 3 digit numbers. To subtract a pair of 2-digit numbers by finding the difference. To subtract 3-digit multiples of 10 by finding the difference between them. To choose the most efficient strategy to subtract from a 3-digit number. To use addition and subtraction to solve problems involving bar charts, pictograms and tables. To use addition and subtraction to solve problems in different contexts.
Links	NCETM- https://www.ncetm.org.uk/classroom-resources/primm-119-securing-mental-strategies-calculation-up-to-999/ OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/informal-and-mental-strategies-for-adding-and-subtracting-two-3-digit-numbers/lessons?sid=659b4b=UKENIFUeW4&sm=0&src=3 WHITE ROSE https://whiteroseeducation.com/resources?year=year-3-new&subject=maths Mastery with greater depth https://www.ncetm.org.uk/media/0aafcvjq/mastery_assessment_y3.pdf
Reasoning	True or false? Are these number sentences true or false? 597 + 7 = 614 804 - 70 = 744 768 + 140 = 908 Give your reasons. Hard and easy questions Which questions are easy / hard? 323 + 10 = 393 + 10 = 454 - 100 = 954 - 120 = Explain why you think the hard questions are hard? Convince me + + The total is 201 Each missing digit is either a 9 or a 1. Write in the missing digits. Is there only one way of doing this or lots of ways? Convince me Making an estimate Which of these number sentences have the answer that is between 50 and 60 174 - 119 333 - 276 932 - 871 Always, sometimes, never Is it always, sometimes or never true that if you subtract a multiple of 10 from any number the units digit of that number stays the same. Is it always, sometimes or never true that when you add two numbers together you will get an even number



Problem solving

[Click on me](#)

- Glossary
- Addend - An addend is a number added to another.
 - Sum - The sum means the total when the numbers are added together.
 - Unitising - Unisiting means treating groups that contain the same number of things as 'ones' or 'units'.
 - Adjust - When you adjust you make a small change to a number. This is done to make a calculation easier to solve mentally.
 - Inverse - The inverse is the opposite or reverse operation. For example, subtraction is the inverse operation of addition.
 - Efficient - Working efficiently means finding a way to solve a problem quickly whilst also maintaining accuracy.
 - Redistribute - Redistribution is a way of transforming a sum to make it easier to calculate mentally.
 - Inverse - The inverse is the opposite or reverse operation. For example, subtraction is the inverse operation of addition.
 - Partition - Partitioning is the act of splitting an object or value down into smaller parts.
 - Minuend - The minuend is the number being subtracted from.
 - Subtrahend - A subtrahend is a number subtracted from another.
 - Difference - The difference is the result after subtracting one number from another.
 - Bar chart - A bar chart uses rectangular bars to show different values.
 - Pictogram - A pictogram is a graph that uses pictures to represent information.
 - Table - A table has information arranged in rows and columns.

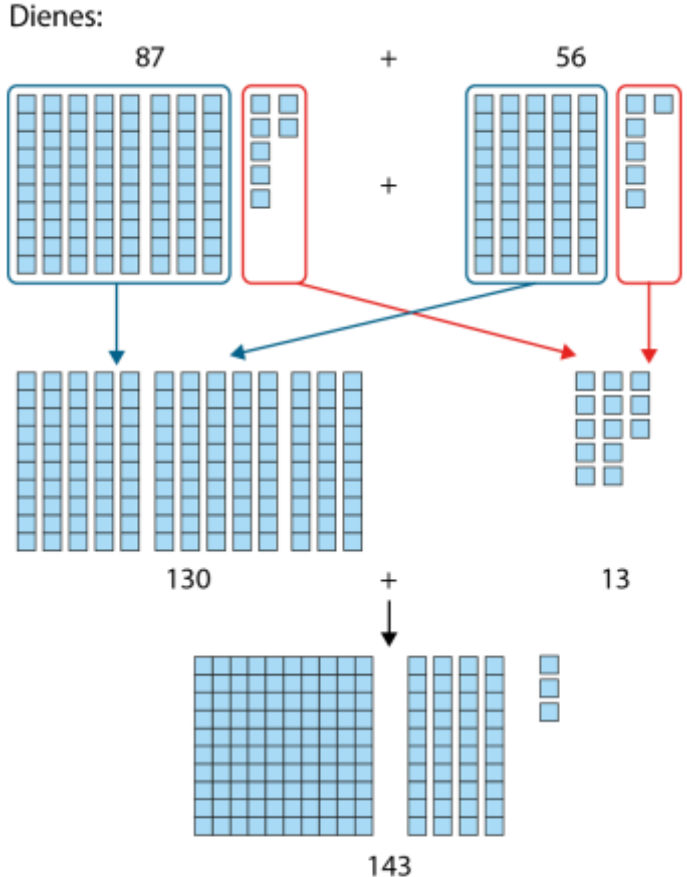
Stem sentences

Adjusting strategy-
_____ plus _____ is equal to _____
then we adjust: _____ minus _____ is equal to _____

Redistributing strategy-
If one addend is increased by an amount and the other addend is decreased by the same amount, the sum remains the same.
I have added _____ to this addend, so I need to subtract _____ from the other addend.

Representations

Dienes:



Jottings:

$$\begin{array}{r} 87 \\ 80 \quad 7 \end{array} + \begin{array}{r} 56 \\ 50 \quad 6 \end{array} = \begin{array}{r} 130 \\ 13 \end{array} = 143$$

Method A:

$$370 + 260 = 37 \text{ tens} + 26 \text{ tens} = 63 \text{ tens} = 630$$

Method B:

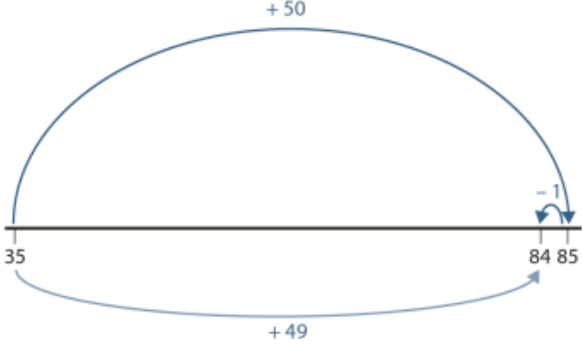
$$370 + 260 = 300 + 200 + 70 + 60 = 500 + 130 = 630$$

?	
67	44

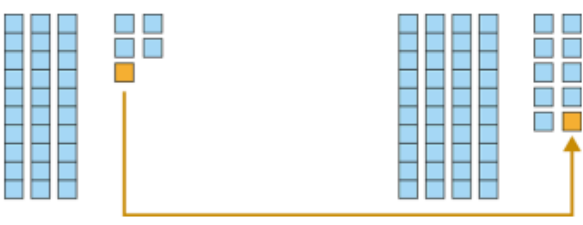
Method A:

$$35 + 49 = 30 + 40 + 5 + 9 = 70 + 14 = 84$$

Method B:


$$35 + 49 = 35 + 50 - 1 = 85 - 1 = 84$$

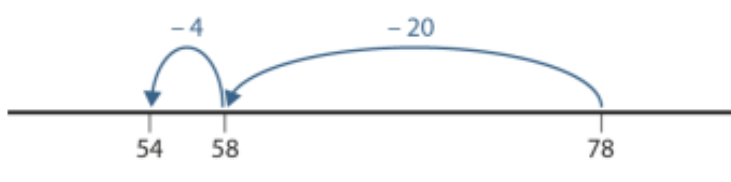
Method C:


$$35 + 49 = 34 + 50 = 84$$

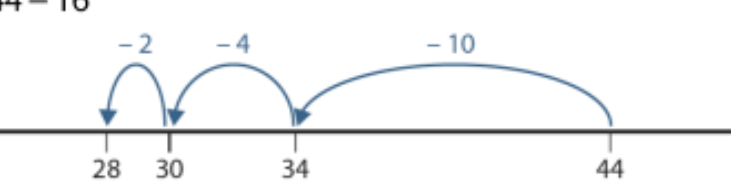
Redistributing strategy (method C) for three-digit numbers – example 1:

$$\begin{array}{r} 520 \\ -10 \end{array} + \begin{array}{r} 290 \\ +10 \end{array} = \boxed{810}$$
$$510 + 300 = \boxed{810}$$

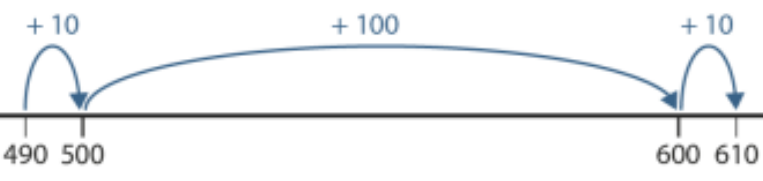
Partitioning the subtrahend (without bridging):

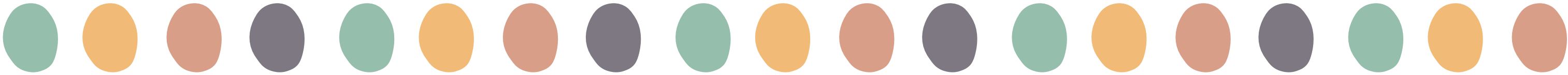
$$78 - 24$$


Partitioning the subtrahend (with bridging):

$$44 - 16$$


610	
490	?



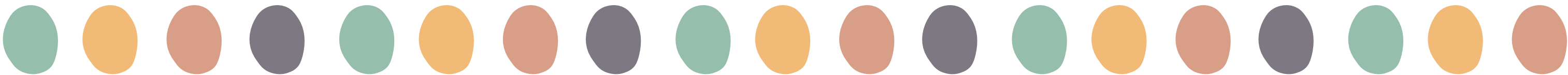


Y3- Overview

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	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Spring 2	Understand additive relationships and apply them to rearrange equations (2 weeks)
Ready to progress	3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction
NCETM documents	FROM TEACHING POINT 4 1.19 Securing mental strategies: calculation up to 999 https://www.ncetm.org.uk/classroom-resources/primm-119-securing-mental-strategies-calculation-up-to-999/
Small steps	To rearrange addition equations. To rearrange subtraction equations. To understand the relationship between addition and subtraction. To identify knows and unknowns in addition equations. To identify knows and unknowns in subtraction equations. To use the additive relationship to rearrange and solve equations. To solve problems using scaled bar chats, pictograms and tables. To understand why the order of addition and subtraction is chosen. To solve multi- step addition and subtraction problems.
Links	NCETM- https://www.ncetm.org.uk/classroom-resources/primm-119-securing-mental-strategies-calculation-up-to-999/ OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/understand-additive-relationships-and-apply-them-to-rearrange-equations/lessons?sid=5844d8=MDxgRIzYrQ&sm=0&src=3 WHITE ROSE https://whiteroseeducation.com/resources?year=year-3-new&subject=maths Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjq/mastery_assessment_y3.pdf
Reasoning	True or false? Are these number sentences true or false? 597 + 7 = 614 804 - 70 = 744 768 + 140 = 908 Give your reasons. Hard and easy questions Which questions are easy / hard? 323 + 10 = 393 + 10 = 454 - 100 = 954 - 120 = Explain why you think the hard questions are hard? Convince me + + The total is 201 Each missing digit is either a 9 or a 1. Write in the missing digits. Is there only one way of doing this or lots of ways? Convince me Making an estimate Which of these number sentences have the answer that is between 50 and 60 174 - 119 333 - 276 932 - 871 Always, sometimes, never Is it always, sometimes or never true that if you subtract a multiple of 10 from any number the units digit of that number stays the same. Is it always, sometimes or never true that when you add two numbers together you will get an even number



	Understand additive relationships and apply them to rearrange equations (2 weeks)
Problem solving	Click on me
Glossary	• Addend - An addend is a number added to another. • Sum - The the total when numbers are added together. • Equation - An equation shows that one number or calculation is equal to another. • Minuend - The minuend is the number being subtracted from. • Subtrahend - A subtrahend is a number subtracted from another. • Difference - The difference is the result after subtracting one number from another. • Rearrange - Rearrange means to change an equation. It could mean moving the parts or the whole or changing it from an addition into a subtraction equation. • Reorder - Reorder means arrange something in a different way. • Bar chart - A bar chart uses rectangular bars to show different values. • Pictogram - A pictogram uses pictures to show information. • Table - A table has information arranged in rows and columns. • Efficient - Working efficiently means finding a way to solve a problem quickly whilst also maintaining accuracy.
Stem sentences	For calculations that involve both addition and subtraction steps, we can add then subtract, or subtract then add; the final answer is the same.
Representations	'Nina had 55 stickers. She gave 12 away. Then she got 4 more. How many stickers does she have now?' 55 - 12 + 4 = 47 55 - 12 = 43 43 + 4 = 47 Equivalent calculations: 45 + 17 - 5 = 57 45 + 17 = 62 62 - 5 = 57 45 - 5 + 17 = 57 45 - 5 = 40 40 + 17 = 57