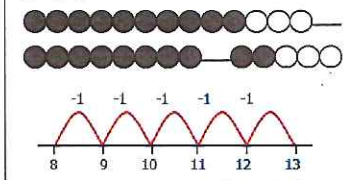
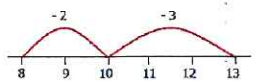
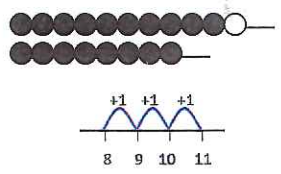
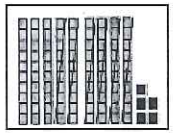
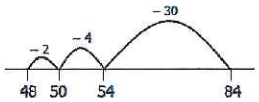
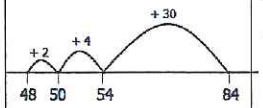
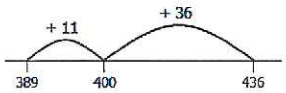
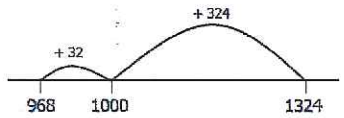
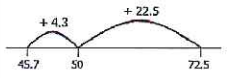
SUBTRACTION

STATUTORY EXPECTATIONS							Rapid Recall/Mental Calculations	Non-statutory guidance
YR	Count … from 1-20 … and say which no. is 1 less than a given no. Using quantities objects, subtract two U nos and count back to find the answer. [Expected] Estimate no. of objects; check quantities by counting up to 20. [Exceeding]	Practical or recorded using ICT. Chloe was playing in the maths area. "I need three more" she said as she added some cubes to the circle. She then realised she had more than her friend. "Oh, I have too many". She removed one. "Now we have the same". During a game of skittles outdoors Joseph knocked three numbered skittles down. He was able to calculate his score in his head. [EYFS Profile exemplifications, STA]	Pictures/Objects I have five cakes. I eat two of them. How many do I have left?  Might be recorded as: *5 – 2 = 3*	Symbolic Mum baked 9 biscuits. I ate 5. How many were left?  [Might be recorded as: *9 – 5 = 4*]				
Y1	Subtract (and add) one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero Read/write/interpret statements involving addition (+), subtraction (-) and equals (=) signs	Practical or recorded using ICT. Pupils use concrete objects and pictorial representations (eg place value counters, Dienes)	**Taking away** – jumps of 1 (modelled using bead strings) 13 – 5 =8  	**Taking away** (efficient jumps) 13 – 5 = 8  No number line: 13 – 3 = 10 10 – 2 = 8	**Counting on** – jumps of 1 (modelled using bead strings) 11 – 8 = 3  	**Counting on** (efficient jumps) With, or without, number line 8 + 2 = 10 10 + 1 = 11	Represent/use number bonds and related subtraction facts within 20. *Problems should include terms: put together, add, altogether, total, take away, distance between, more than and less than, so pupils develop concept of +/- and use operations flexibly.* Missing number problems (eg 7 = ? – 9)	*Memorise/reason with bonds to 10/20 in several forms (eg 9 + 7 = 16; 16 - 7 = 9; 7 = 16 - 9). Pupils should realise the effect of adding or subtracting zero - establishes +/- as related operations.* *Pupils combine and increase numbers, counting forwards and backwards.*
Y2	TU - U TU - tens TU - TU [Show subtraction of two numbers cannot be done in any order.]	Recognise/use relationship betw. +/- to check calcs and missing number problems. Pupils use concrete objects and pictorial representations and **mental strategies** (eg place value counters, Dienes)	Practical/visual images 95 - 60 = 35 	**Taking away** 84 - 36 = 48  [Also jumps can be in 10s/1s]	**Taking away** (no number line) 84 - 36 = 48 84 - 30 = 54 54 - 4 = 50 50 - 2 = 48	**Counting on** 84 - 48 = 36  [Also jumps can be in 10s/1s]	*Recording subtraction in columns supports place value and prepares for formal written methods with larger numbers.* 98 - 35 = 63 90 and 8 30 and 5 60 and 3	Recall and use subtraction facts to 20 fluently. Derive and use related facts up to 100. Solve problems by applying increasing knowledge of mental methods.	*Pupils extend understanding of the language of subtraction to include **difference**.* *Practise subtraction to 20 to derive facts such as using 3 + 7 = 10, 10 - 7 = 3 and 7 = 10 - 3 to calculate 30 + 70 = 100, 100 - 70 = 30 and 70 = 100 - 30. Check calculations, including by adding to check subtraction.*
Y3	Use **formal** written methods of **columnar addition** TU - TU HTU - TU HTU - HTU	**Counting on** 436 - 389 = 47  	**Taking away** (no number line) 326 - 178 = 148 326 - 100 = 226 226 - 70 = 156 156 - 6 = 150 150 - 2 = 148	874 - 523 = 351 (no decomposition 8 7 4 – 5 2 3 3 5 1	**Decomposition** 723 - 458 = 265 700 20 3 400 50 8 600 110 13 400 50 8 200 60 5	**Decomposition** 932 - 457 = 475 8 12 1 9 3 2 – 4 5 7 4 7 5	Estimate answers and use inverse to check.	HTU - U HTU - tens HTU – hundreds Use number facts and place value to solve problems.	
Y4	Use **formal** written methods of **columnar subtraction**. HTU - HTU ThHTU - TU ThHTU - HTU ThHTU - ThHTU	**Counting on** 1324 - 968 = 356  	**1000 and 300 and 70 and 4** – **900 and 60 and 8** **1300 and 60 and 14** – **900 and 60 and 8** **400 and 0 and 6** **Decomposition: 1374 - 968 = 406**	**Decomposition** 1374 - 968 = 406 6 13 7 14 – 9 6 8 4 0 6	Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why. Solve simple measure and money problems involving fractions and decimals to 2dp.	Estimate and use inverse operations to check. Estimate, compare and calculate different measures, including money in pounds and pence.	*Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency.*	*Pupils build on their understanding of place value and decimal notation to record metric measures, including money.*
Y5	Subtract whole numbers >4 digits, including using **formal** methods (**columnar subtraction**). Decimals up to 2dp (eg 72.5 - 45.7)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve multi-step problems in contexts, deciding which operations/methods to use and why.	**Solve problems involving number up to 3dp. [*Fractions*]** **Solve problems involving converting betw. units of time. [*Measurement*]** **Solve problems involving measure [eg length, mass, volume, money] using decimal notation including scaling. [*Measurement*]**	**Counting on** 72.5 – 45.7 = 26.8  	**Taking away** (no number line) 72.5 – 45.7 72.5 – 40 = 32.5 32.5 – 5 = 27.5 27.5 – 0.7 = 26.8	**Decomposition** 72.5 - 45.7 = 26.8 6 11 12 15 7 2 . 5 – 4 5 . 7 2 6 . 8	*Pupils practise subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1.*	Subtract numbers mentally with increasingly large numbers (eg 12462 - 2300 = 10162). *Pupils mentally subtract tenths, and one-digit whole numbers and tenths.*	*They extend their knowledge of fractions to thousandths and connect to decimals and measures.* *Pupils should go beyond the measurement and money models of decimals (eg by solving puzzles.*
Y6	Solve multi-step problems in contexts, deciding which operations/methods to use and why. Decimals up to 3dp (Context: Measures)	Use knowledge of the order of operations to carry out calculations involving subtraction. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	**Solve problems which require answers to be rounded to specified degrees of accuracy. [*Fractions*]** **Solve problems involving the calculation and conversion of units of measure, using decimal notation to 3dp where appropriate.**				▪ There was 2.5 litres in the jug. Stuart drank 385 ml. How much was left? ▪ 18.07 km - 3.243 km ▪ Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Perform mental calcs, incl. with mixed operations and large numbers. *Using the no. line, pupils subtract positive/negative integers for measures such as temperature.*	*Pupils develop skills of rounding/estimating to predict/check order of magnitude of ans to decimal calcs. Includes rounding ans to a degree of accuracy & checking reasonableness.*

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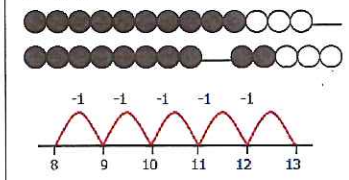
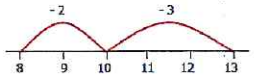
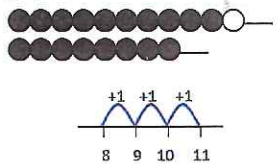
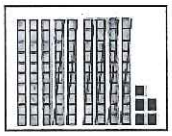
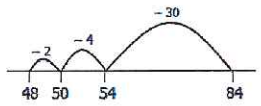
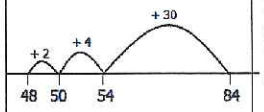
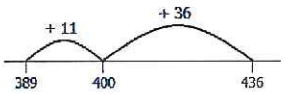
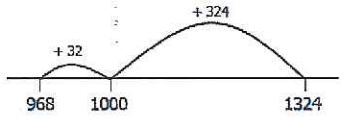
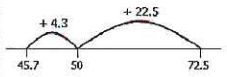
Y1	Subtract (and add) one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero Read/write/interpret statements involving addition (+), subtraction (-) and equals (=) signs	Practical or recorded using ICT. Pupils use concrete objects and pictorial representations (eg place value counters, Dienes)	**Taking away** – jumps of 1 (modelled using bead strings) 13 – 5 =8  	**Taking away** (efficient jumps) 13 – 5 = 8  No number line: 13 – 3 = 10 10 – 2 = 8	**Counting on** – jumps of 1 (modelled using bead strings) 11 – 8 = 3  	**Counting on** (efficient jumps) With, or without, number line 8 + 2 = 10 10 + 1 = 11	Represent/use number bonds and related subtraction facts within 20. *Problems should include terms: put together, add, altogether, total, take away, distance between, more than and less than, so pupils develop concept of +/- and use operations flexibly.* Missing number problems (eg 7 = ? – 9)	*Memorise/reason with bonds to 10/20 in several forms (eg 9 + 7 = 16; 16 - 7 = 9; 7 = 16 - 9). Pupils should realise the effect of adding or subtracting zero - establishes +/- as related operations.* *Pupils combine and increase numbers, counting forwards and backwards.*
Y2	TU - U TU - tens TU - TU [Show subtraction of two numbers cannot be done in any order.]	Recognise/use relationship betw. +/- to check calcs and missing number problems. Pupils use concrete objects and pictorial representations and mental strategies (eg place value counters, Dienes)	Practical/visual images 95 - 60 = 35 	**Taking away** 84 - 36 = 48  [Also jumps can be in 10s/1s]	**Taking away** (no number line) 84 - 36 = 48 84 - 30 = 54 54 - 4 = 50 50 - 2 = 48	**Counting on** 84 - 48 = 36  [Also jumps can be in 10s/1s]	*Recording subtraction in columns supports place value and prepares for formal written methods with larger numbers.* 98 - 35 = 63 90 and 8 30 and 5 60 and 3	Recall and use subtraction facts to 20 fluently. Derive and use related facts up to 100. Solve problems by applying increasing knowledge of mental methods.	*Pupils extend understanding of the language of subtraction to include* **difference**. *Practise subtraction to 20 to derive facts such as using 3 + 7 = 10, 10 - 7 = 3 and 7 = 10 - 3 to calculate 30 + 70 = 100, 100 - 70 = 30 and 70 = 100 - 30. Check calculations, including by adding to check subtraction.*
Y3	Use **formal** written methods of **columnar addition** TU - TU HTU - TU HTU - HTU	**Counting on** 436 - 389 = 47  	**Taking away** (no number line) 326 - 178 = 148 326 - 100 = 226 226 - 70 = 156 156 - 6 = 150 150 - 2 = 148	874 - 523 = 351 (no decomposition 8 7 4 – 5 2 3 3 5 1	**Decomposition** 723 - 458 = 265 700 20 3 400 50 8 600 110 13 400 50 8 200 60 5	**Decomposition** 932 - 457 = 475 8 12 1 9 3 2 – 4 5 7 4 7 5	Estimate answers and use inverse to check.	HTU - U HTU - tens HTU – hundreds Use number facts and place value to solve problems.	
Y4	Use **formal** written methods of **columnar subtraction**. HTU - HTU ThHTU - TU ThHTU - HTU ThHTU - ThHTU	**Counting on** 1324 - 968 = 356  	**1000 and 300 and 70 and 4** – **900 and 60 and 8** **1300 and 60 and 14** – **900 and 60 and 8** **400 and 0 and 6** **Decomposition: 1374 - 968 = 406**	**Decomposition** 1374 - 968 = 406 6 13 7 4 – 9 6 8 4 0 6	Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why. Solve simple measure and money problems involving fractions and decimals to 2dp.	Estimate and use inverse operations to check. Estimate, compare and calculate different measures, including money in pounds and pence.	*Pupils continue to practise both mental methods and columnar addition and subtraction with increasingly large numbers to aid fluency.*	*Pupils build on their understanding of place value and decimal notation to record metric measures, including money.*
Y5	Subtract whole numbers >4 digits, including using **formal** methods (**columnar subtraction**). Decimals up to 2dp (eg 72.5 - 45.7)	Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve multi-step problems in contexts, deciding which operations/methods to use and why.	**Solve problems involving number up to 3dp. [*Fractions*]** **Solve problems involving converting betw. units of time. [*Measurement*]** **Solve problems involving measure [eg length, mass, volume, money] using decimal notation including scaling. [*Measurement*]**	**Counting on** 72.5 – 45.7 = 26.8  	**Taking away** (no number line) 72.5 – 45.7 72.5 – 40 = 32.5 32.5 – 5 = 27.5 27.5 – 0.7 = 26.8	**Decomposition** 72.5 - 45.7 = 26.8 6 11 12 5 7 2 . 5 – 4 5 . 7 2 6 . 8	*Pupils practise subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1.*	Subtract numbers mentally with increasingly large numbers (eg 12462 - 2300 = 10162). *Pupils mentally subtract tenths, and one-digit whole numbers and tenths.*	*They extend their knowledge of fractions to thousandths and connect to decimals and measures.* *Pupils should go beyond the measurement and money models of decimals (eg by solving puzzles.*
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