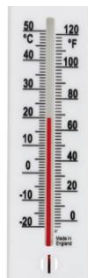


YEAR 5		Subtraction																				
Vocabulary: difference, minus, subtract, take way, less than; (see previous year groups)																						
Concrete		Pictorial	Abstract																			
Subtract whole numbers with more than 4 digits (up to 6 digit numbers) 54 543 - 21 322 = 33 221 <table><tr><td>TTh</td><td>Th</td><td>H</td><td>T</td><td>O</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td>3</td><td>2</td><td>2</td><td>1</td></tr></table> Exchanging at different and several points. No place value digits for 6-digit numbers available.		TTh	Th	H	T	O						3	3	2	2	1	Subtract whole numbers with more than 4 digits. <u>Counting back using a number line</u> Building on from year 4 using the number line (see year 4) <u>Counting on using a number line</u> Where the numbers in the calculation allow for easy adding of the resulting jumps.	Written Subtract whole numbers with more than 4 digits. <table><tr><td>No exchanging</td><td>Exchanging</td></tr><tr><td>$\begin{array}{r} 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$</td><td>$\begin{array}{r} 1 \\ 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$</td></tr></table>	No exchanging	Exchanging	$\begin{array}{r} 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$	$\begin{array}{r} 1 \\ 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$
TTh	Th	H	T	O																		
3	3	2	2	1																		
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$\begin{array}{r} 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$	$\begin{array}{r} 1 \\ 54\ 543 \\ -21\ 322 \\ \hline 33\ 221 \end{array}$																					
Subtracting decimals (up to 2 decimal places) 36.45 - 12.23 = 24.22 <table><tr><td>T</td><td>O</td><td>th</td><td>hth</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>4</td><td>2</td><td>2</td></tr></table> Start with no exchanging then build up to exchanging at different points using: 1 ten = 10 ones; 1 one = 10 tenths; 1 tenth = 10 hundredths.		T	O	th	hth					2	4	2	2	Subtracting decimals (up to 2 decimal places) <u>Counting back:</u> 19.2 - 2.7 = 16.5 <u>Counting on:</u> 8.3 - 4.8 = 3.5 	Subtracting decimals (up to 2 decimal places) <table><tr><td>No exchanging</td><td>Exchanging</td></tr><tr><td>$\begin{array}{r} 36.45 \\ -12.23 \\ \hline 24.22 \end{array}$</td><td>$\begin{array}{r} 1 \\ 36.45 \\ -12.23 \\ \hline 24.22 \end{array}$</td></tr></table>	No exchanging	Exchanging	$\begin{array}{r} 36.45 \\ -12.23 \\ \hline 24.22 \end{array}$	$\begin{array}{r} 1 \\ 36.45 \\ -12.23 \\ \hline 24.22 \end{array}$			
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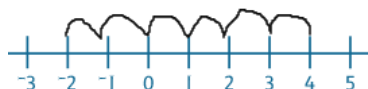
Subtracting negative numbers

Using real life objects:

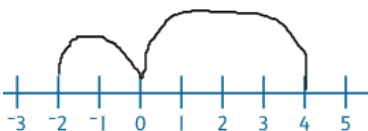


Subtracting negative numbers

$$4 - 6 = -2$$



Number line counting backwards in single increments from 4 to -2.



Number line counting backwards: first to 0 and then the remaining "jumps" back to -2.

Could be shown vertically too.

Develops in to a mental method no written method.

Mental Methods:

Counting on:

$$7.2 - 6.8$$

$$6.8 + 0.2 = 7$$

$$7 + 0.2 = 7.2 \text{ then } 0.2 + 0.2 = 0.4$$

Partitioning:

No exchanging

$$34\ 567 - 12\ 354$$

Adjusting:

$$23\ 345 - 1\ 999 \text{ (+ 1 to both numbers)}$$

$$23\ 346 - 2000 = 21\ 346$$

$$8.3 - 1.9 \text{ (+ 0.1 to both numbers)}$$

$$8.4 - 2 = 6.4$$

$$14.56 - 0.19 \text{ (+ 0.01 to both numbers)} \quad 14.57 - 2 = 12.57$$

Using known facts and place value:

If $16 - 8 = 8$ then:

$$1.6 - 0.8 = 0.8$$

$$0.16 - 0.08 = 0.08$$

Counting back:

$$7.87 - 2.03$$

(partition 2.03 then $7.87 - 2 = 5.87$)

$$5.87 - 0.03 = 5.84.$$

Subtracting a power of 10

$$23\ 453 - 10\ 000 = 13\ 453$$

$$45\ 321 - 1\ 000 = 44\ 321$$

Children recognise which column will change.

