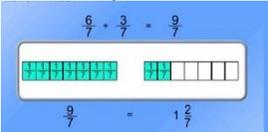


# CALCULATION POLICY - SUBTRACTION

	Year 3	Year 4	Year 5	Year 6
<b>Mental Calculations and Methods *</b>	<p>Subtract 1 and 2 digit numbers from 3 digit numbers.</p> <p>Subtract single digit by bridging through boundaries.</p> <p>Partition second number to subtract.</p> <p>Subtract multiples of 10 and 100.</p> <p>Difference between by counting on.</p> <p>Subtract near multiples of 10 and 100 by rounding and adjusting.</p>	<p>Subtract multiples of 10s , 100s, 1000s. Fluency of 2 digit subtract 2 digit numbers.</p> <p>Partition second number to subtract.</p> <p>Decimal subtraction from 10 or 1.</p> <p>Difference between by counting on.</p> <p>Subtract near multiples by rounding and adjusting.</p> <p>Solve subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>Subtract multiples of 10s , 100s, 1000s, tenths.</p> <p>Fluency of 2 digit - 2 digit including with decimals.</p> <p>Partition second number to subtract. Difference between.</p> <p>Adjust numbers to subtract.</p> <p>Subtract numbers mentally with increasingly large numbers. E.g. <math>12\ 462 - 2300 = 10\ 162</math></p> <p>Use rounding to check answers.</p> <p>Practice subtracting decimals, including a mix of whole numbers and decimals and decimals with different numbers of decimal places.</p> <p>Mentally subtract tenths and one-digit whole numbers and tenths.</p>	<p>Perform mental calculations, including with mixed operations and large numbers.</p> <p>Use estimation to check answers to calculations.</p> <p>Subtract multiples of 10s, 100s, 1000s, tenths and hundredths.</p> <p>Partition second number to subtract.</p> <p>Use number facts bridging and place value.</p> <p>Adjust numbers to subtract. Difference between.</p>
<b>Fractions *</b>	<p>Count down in tenths.</p> <p>Subtract fractions with the same denominator within one whole.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <math display="block">\frac{3}{6} - \frac{1}{6} = \frac{2}{6}</math> </div> <p>Represent using the bar model</p> 	<p>Count down in hundredths.</p> <p>Subtract fractions with the same denominator.</p> <p>Solve simple measure and money problems involving fractions and decimals to two decimal places.</p> 	<p>Use physical and pictorial representations to stress the place value relationships between money, decimals and whole numbers e.g. place value mat.</p>	<p>Subtract fractions with different denominators and mixed numbers.</p> <p>Practice calculations with simple fractions and decimal fraction equivalents to aid fluency.</p>

# CALCULATION POLICY - SUBTRACTION

## Written Methods

Subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction

$$\begin{array}{r} 2 \ 3 \ 1 \\ - 3 \ 4 \ 4 \\ - 1 \ 8 \ 7 \\ \hline 1 \ 5 \ 7 \end{array}$$

Subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate.

$$\begin{array}{r} 2 \ 3 \ 1 \\ 2 \ 3 \ 4 \ 4 \\ - 1 \ 8 \ 7 \\ \hline 2 \ 1 \ 5 \ 7 \end{array}$$

Subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

$$\begin{array}{r} 2 \ 3 \ 1 \\ 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline 5 \ 1 \ 1 \ 5 \ 7 \end{array}$$

Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

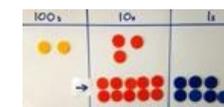
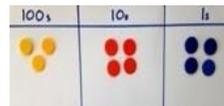
## Developing Conceptual Understanding

Taking away and exchanging, 344 – 187 Place value counters (complete the calculation in the same way with Diennes)

Find the one hundred and eighty and seven. Exchange to create three hundred and thirty and fourteen.

Then take away the 'seven'

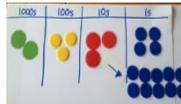
Exchange to create two hundred,



Find the one hundred and eighty and eighty-seven.



Exchange a 10 for ten 1s to create two thousand, three hundred and thirty and fourteen.



Then take away 'seven'.



Exchange a 100 for ten 10s to create two thousand, two hundred, thirteen tens and seven.



Then take away 'eighty'



Then take away 'one hundred'



Set out the calculation in columns

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline \end{array}$$

The 1s column: four subtract seven. Because seven is greater than four, exchange a 10 for ten 1s. So there are now three 10s and fourteen 1s.

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline \end{array}$$

Fourteen 1s subtract seven 1s makes seven 1s – record this

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline 7 \end{array}$$

The 10s column: three subtract eight. Because eight is greater than three, Exchange a 100 for ten 10s. So there are now two 100s and thirteen 10s.

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline 7 \end{array}$$

Thirteen 10s subtract eight 10s makes five 10s – record this. The 100s column: two subtract one. Two 100s subtract one 100 makes one 100 – record this.

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline 5 \ 7 \end{array}$$

$$\begin{array}{r} 5 \ 2 \ 3 \ 4 \ 4 \\ - 1 \ 1 \ 8 \ 7 \\ \hline 2 \ 5 \ 7 \end{array}$$

Solve subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

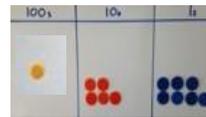
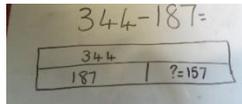
# CALCULATION POLICY - SUBTRACTION

thirteen tens and seven

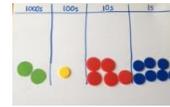
Then take away the 'eighty'

Then take away the 'one hundred'

Bar Model:



There are no thousands to take away.



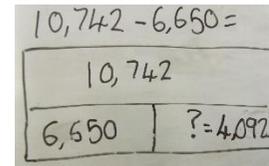
The 1000s column: two subtract one. Two 1000s subtract one 1000 makes one 1000 – record this.

$$\begin{array}{r} \phantom{5} \phantom{2} \phantom{3} \phantom{4} \phantom{4} \\ 5 \phantom{2} \phantom{3} \phantom{4} \phantom{4} \\ - 1 \phantom{1} \phantom{1} \phantom{8} \phantom{7} \\ \hline 1 \phantom{1} \phantom{1} \phantom{5} \phantom{7} \end{array}$$

The 10,000s column: there are only five 10000s with nothing to subtract. So record 5.

$$\begin{array}{r} \phantom{5} \phantom{2} \phantom{3} \phantom{4} \phantom{4} \\ 5 \phantom{2} \phantom{3} \phantom{4} \phantom{4} \\ - 1 \phantom{1} \phantom{1} \phantom{8} \phantom{7} \\ \hline 5 \phantom{1} \phantom{1} \phantom{5} \phantom{7} \end{array}$$

Bar Model:



\* please refer to Mayflower Academy Non-negotiables document

**MAYFLOWER COMMUNITY ACADEMY SUBTRACTION SUPPORT VIDEOS CAN BE FOUND AT:**

YEAR FOUR: [https://www.youtube.com/watch?v=QR4kB\\_VR7uk&t=34s](https://www.youtube.com/watch?v=QR4kB_VR7uk&t=34s)

YEAR FIVE: <https://www.youtube.com/watch?v=nHgR6MFulQI>

YEAR SIX: <https://www.youtube.com/watch?v=knmQWQWzEol>