

**Subtraction Prior Learning Assessment Question 6 :**

**LO:** I am beginning to use the column method to subtract 2 amounts.

**NC:** NAS2 add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction where appropriate

**Assessment Question:**

Prior Learning:

<b>123</b> Number + Place Value	<b>Question 6:</b> I am beginning to use the column method for subtraction sums.	I feel																																		
Show me how to work out:																																				
<b>a) 89 - 45 =</b> <table style="margin: auto;"><tr><td></td><td style="text-align: center;">T</td><td style="text-align: center;">O</td></tr><tr><td></td><td style="text-align: center;">8</td><td style="text-align: center;">9</td></tr><tr><td style="text-align: center;">-</td><td style="text-align: center;">4</td><td style="text-align: center;">5</td></tr><tr><td colspan="3" style="text-align: center;">_____</td></tr><tr><td colspan="3" style="text-align: center;">_____</td></tr></table>		T	O		8	9	-	4	5	_____			_____			<b>b) 456 - 215 =</b> <table style="margin: auto;"><tr><td></td><td style="text-align: center;">H</td><td style="text-align: center;">T</td><td style="text-align: center;">O</td></tr><tr><td></td><td style="text-align: center;">4</td><td style="text-align: center;">5</td><td style="text-align: center;">6</td></tr><tr><td style="text-align: center;">-</td><td style="text-align: center;">2</td><td style="text-align: center;">1</td><td style="text-align: center;">5</td></tr><tr><td colspan="4" style="text-align: center;">_____</td></tr><tr><td colspan="4" style="text-align: center;">_____</td></tr></table>		H	T	O		4	5	6	-	2	1	5	_____				_____			
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**Teacher Input Ideas:**

The column method should only be taught when the children have understanding of partitioning digits into their value and subtracting these together in sections. An introduction to informal written methods can be found in lesson ideas for Question 5.

The children should show understanding that the hundreds, tens and ones can be partitioned as below. For the end of year 3, the children should be able to begin to partition the amounts and lay these above each other as shown below:

hundreds	tens	ones	
100	50	7	
100	20	4	
_____			
	30	3	= 33

Once the children demonstrate understanding here, then the children should be introduced to a quicker way of organising and subtracting using knowledge of the value of the digits. For example: I know the value of each digit so if I group these together it will help me to subtract. This can be used alongside objects or images of objects grouped in hundreds, tens and ones to help the children replace the amounts with a digit.

	hundreds	tens	ones	
	1	5	7	
-	1	2	4	
		3	3	= 33

Once the children show understanding on the grid with using the digits, model laying it out without the grid, explaining that you ensure the hundreds are together, the tens are together and the ones are together ready to subtract. Providing the children with the sum laid out on squared paper will help the children ensure that the amounts align.

h t o

4 6 8

- 2 1 5

2 5 3

### Practice Activities

**Purple Practice:** Most suited for children who demonstrate no understanding of the formal method in Question 6 but demonstrate understanding of partitioning amounts for subtraction.

This activity is suited for children ready to think about the value of each digit when partitioning amounts. The place value grid supports the children in partitioning amounts into hundreds, tens and units, thinking about the value of each digit. The children are

then to work along either from the hundreds to units or from the units to the hundreds, subtracting from each group.

If some children are still finding this hard to see, you could use objects or images to show how they can be replaced with the digit for the number of hundreds, number of tens and the number of ones. Ensure the correct vocabulary is modelled to check that the children demonstrate understanding of the value of the digits. Such as subtract 1 lot of hundred from 3 lots of hundred.

**Green Practice:** Most suited for children who demonstrate some understanding in Question 6 however made errors and will benefit from the sums being laid out to secure the method.

For this activity the children are provided with 2 and 3 digit amounts to subtract which are laid out ready for the children to work out the answer. Encourage the children to discuss what they are doing at each step and to discuss why the sums are laid out in this way. In these sums the children are presented with amounts that do not require any exchanging.

**Yellow Practice:** Most suited for children who demonstrate a good understanding in Question 6 of the prior learning assessment and are ready to lay out subtraction sums with little support.

For the yellow activity the children are provided with 2 amounts written on blocks and are asked to subtract the lower amount from the larger amount. The children are also provided with space and some guidance with layout for each sum, however the children will need to place the digits in the correct positions to help them to calculate the answer. In these sums the children are presented with amounts that do not require any exchanging.

**Mastery** : For this activity the children are presented with a problem to solve . They are presented with 3 characters who have been saving money. The children need to subtract the price of the item they have bought and work out how much money each character is left with. Encourage the children to apply the use of the subtraction column method or mental methods. Using their knowledge of place value and ordering amounts, the children are to work out who has the most money left after their purchase.

**Answers**

**Purple:**

1) 133

2) 33

3) 112

4) 251

5) 225

6) 223

**Green:**

1) 131

2) 73

3) 192

4) 132

5) 202

6) 301

7) 651

8) 830

7) 230

**Yellow:**

1) 173

2) 228

3) 250

4) 202

5) 784

6) 41

**Mastery:**

Dylan

Work out the answer to each sum. Can you use the place value chart and partitioning to help you?

**189 - 56**

hundreds	tens	ones
1	8	9
	5	6
<hr/>		
1	3	3

= 133

**156 - 123**

hundreds	tens	ones
<hr/>		

=

**247 - 135**

hundreds	tens	ones
<hr/>		

=

Work out the answer to each sum. Can you use the place value chart and partitioning to help you?

**367 - 116**

hundreds	tens	ones
<hr/>		

-

=

**435 - 210**

hundreds	tens	ones
<hr/>		

-

=

**698 - 475**

hundreds	tens	ones
<hr/>		

-

=

Look at each sum. Use the formal subtraction method to work out the answers.

$$\begin{array}{r} \text{h t o} \\ 194 \\ - 63 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 185 \\ - 112 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 299 \\ - 107 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 386 \\ - 254 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 473 \\ - 271 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 838 \\ - 507 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 896 \\ - 245 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 884 \\ - 54 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} \text{h t o} \\ 990 \\ - 760 \\ \hline \\ \hline \end{array}$$

**Challenge:** explain to a friend how you worked out the answers and the method you have used.

Look at the subtraction sums below. Calculate the answers using the column method.

1)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 289 \\ - 116 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$

2)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 678 \\ - 450 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$

3)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 474 \\ - 224 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$

4)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 578 \\ - 376 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$

5)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 987 \\ - 203 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$

6)

$$\begin{array}{r} \text{h} \quad \text{t} \quad \text{o} \\ 455 \\ - 414 \\ \hline \hline \end{array} = \boxed{\phantom{000}}$$



Three brothers and sisters have been saving the money they receive from Christmas and birthdays.

Isla



£175

Dylan



£266

Ethan



£259

They each buy themselves an item in January.

Isla



£ 42

Dylan



£ 125

Ethan



£ 150

Who has the most money left after buying their item?