# Reasoning and Problem Solving Step 2: Subtract More than 4 Digits 

## National Curriculum Objectives:

Mathematics Year 5: (5C2) Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

## Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Find the missing counters and digits in a subtraction. Includes subtracting 5-digit numbers from 5 -digit numbers. No exchanging or use of zero as a placeholder. Includes visual representations.
Expected Find the missing digits in a subtraction. Includes subtracting 5-digit numbers from 5digit numbers. Includes exchanging and some use of zero as a placeholder. Includes column method.
Greater Depth Find the missing digits in a subtraction. Includes subtracting 5-digit numbers from 5-digit numbers. Includes exchanging and use of zero as a placeholder. Includes use of linear representations for subtractions.

Questions 2, 5 and 8 (Problem Solving)
Developing Complete a subtraction with missing digits using digit cards. Subtracting 5-digit numbers from 5-digit numbers. No exchanging or use of zero as a placeholder. Includes use of visual representations.
Expected Complete a subtraction with missing digits using digit cards. Subtracting 5 -digit numbers from 5-digit numbers. Includes exchanging and some use of zero as a placeholder. Includes use of column subtraction.
Greater Depth Complete a subtraction with missing digits using digit cards. Subtracting 5-digit numbers from 5-digit numbers. Includes exchanging and use of zero as a placeholder. Includes use of linear representations of subtractions.

Questions 3, 6 and 9 (Reasoning)
Developing Find and explain the mistake/s in a column subtraction. Includes subtracting 5digit numbers from 5 -digit numbers. No exchanging or use of zero as a placeholder. Includes use of visual representations.
Expected Find and explain the mistake/s in a column subtraction. Includes subtracting 5-digit numbers from 5-digit numbers. Includes exchanging and use of zero as a placeholder. Includes use of column subtractions.
Greater Depth Find and explain the mistake/s in a column subtraction. Includes subtracting 5digit numbers from 5-digit numbers. Includes exchanging and examples of unconventional partitioning. Some numbers written in words.

## More Year 5 Addition and Subtraction resources.

Did you like this resource? Don't forget to review it on our website.

1a．Find the missing counters and digits in the subtraction．

|  | T Th | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | － | 000 |  | $\cdots$ | $\bigcirc 00$ |
| － | － | － | － | － | $\begin{array}{ll} 0 & 0 \\ 0 & 0 \\ \hline \end{array}$ |
|  | 2 |  | 6 | 1 |  |

1b．Find the missing counters and digits in the subtraction．


2a．Use the counter and digit cards to complete the subtraction．


3a．Alf has used column method to complete the subtraction below．

| T Th | Th | H | T | O |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 0 |
| - |  |  |  |  | 0 |
|  | 2 | 3 | 3 | 1 | 3 |

Is he correct？Explain why．
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2b．Place the missing counters and digits to complete the calculation below．


3b．Tia has used column method to complete the subtraction below．

| T Th | Th | H | T | O |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 00 |  |
|  | 2 | 8 | 7 | 2 | 6 |

Is she correct？Explain why．

Aa. Find the missing digits in the subtraction.

| 3 |  | 9 | 6 | 3 |
| ---: | ---: | ---: | ---: | :---: |
| - | 1 | 9 | 5 | 4 |

fa. Use the digit cards to complete the subtraction.

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ba. Kali has used column method to answer the subtraction below.

$$
\begin{array}{r}
2 \\
2 \\
-\quad 1 \\
\hline
\end{array} \frac{1}{2} 0
$$

Is he correct? Explain why.

4b. Find the missing digits in the subtraction.

bb. Use the digit cards to complete the subtraction.

bb. Leah has used column method to answer the subtraction below.

$$
\begin{aligned}
& 5^{1} 0 \\
& \text { - } 22103 \\
& \begin{array}{lllll}
3 & 9 & 4 & 0 & 4
\end{array}
\end{aligned}
$$

Is she correct? Explain why.

7a. Find the missing digits in the subtraction.

7b. Find the missing digits in the subtraction.


9a. Tim has used column method to answer a subtraction and has written it out below.

8 ten thousands, 200 tens and 9 ones subtract 37 thousands, 98 tens and 3 ones equals 42 thousands, 220 tens and 7 ones.

9b. Ava has used column method to answer a subtraction and has written it out below.

500 hundreds, 8 tens and 0 ones subtract 2 ten thousands, 9 thousands and 826 ones equals 200 hundreds, 26 tens and 3 ones.

Is he correct? Explain why.
Is she correct? Explain why.

## Reasoning and Problem Solving Subtract More than 4 Digits

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## Developing

1a. $38, \underline{927}-14,314=24,61 \underline{3}$
2a. $44,2 \underline{2} 6-1 \underline{2}, \underline{121}=32,11 \underline{5}$
3a. Alf is incorrect. He has subtracted the thousands columns incorrectly. The correct answer should be 24,313.

## Expected

4 4a. $3 \underline{9}, 963-19,54 \underline{\underline{2}}=\underline{20,416}$
5a. $\underline{6}, \underline{2} 1 \underline{\underline{2}}-5 \underline{6}, 8 \underline{2} 3=10,396$
6a. Kai is incorrect. He has subtracted the tens and ten thousands columns incorrectly. The correct answer should be 21,201.

## Greater Depth

7a. $61,2 \underline{257}-17,984=43,273$
8a. $\underline{55,248-12, \underline{8} 04=42,444}$
9 a . Tim is incorrect. He has subtracted the ones, hundreds and thousands columns incorrectly. The correct answer should be 44,026.

## Developing

1b. $36,459-14,342=22,117$
2b. $\underline{24,3 \underline{5} 6-11, \underline{2} 42=1 \underline{3}, 11 \underline{4}, ~}$
3b. Tia is incorrect. She has added the hundreds and thousands columns instead of subtracting. She has also subtracted the ten thousands column incorrectly. The correct answer should be 34,126.

## Expected

4b. $48,527-24,1 \underline{9} 3=24, \underline{3} 34$
5b. $48,35 \underline{6}-\underline{19}, 2 \underline{8} 1=29, \underline{0} 75$
6b. Leah is incorrect. She has subtracted the tens and thousands columns incorrectly. She has also forgotten to change the 5 to a 4 in the ten thousands column after exchanging. The correct answer should be 28,424.

## Greater Depth

7b. $30,402-17,650=12,752$
8b. $\underline{71,300-28,6 \underline{02}=4 \underline{2}, \underline{698}, ~}$
9b. Ava is incorrect. She has subtracted the ones and tens columns incorrectly. The correct answer should be 20,254.

