Reasoning and Problem Solving
Step 4: Subtract 1-digit from 3-digits

National Curriculum Objectives:

Mathematics Year 3: (3C1) Add and subtract numbers mentally, including

- three-digit number and ones
- three-digit number and tens
- three-digit number and hundreds

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use the digit cards given to make a subtraction sentence with a target number (no crossing 10 and all cards provided and used).
Expected Use the digit cards given to make a subtraction sentence with a target number (crossing 10 and all cards used).
Greater Depth Use the digit cards given to make a subtraction sentence with a target number. Hundreds and tens columns affected (crossing 10 and not all cards used).

Questions 2, 5 and 8 (Reasoning)
Developing When given a subtraction question and answer, determine whether the answer is correct and why (visual representation provided and no crossing 10).
Expected When given a subtraction question and answer, determine whether the answer is correct and why (crossing 10).
Greater Depth When given a subtraction question and a theoretical answer, determine whether the theory is true and why.

Questions 3, 6 and 9 (Problem Solving)
Developing Fill in the blanks using <, > or = (1 calculation required per question part and no crossing 10).
Expected Fill in the blanks using <, > or = (2 calculations required per question part and crossing 10).
Greater Depth Fill in the blanks using <, > or = (3 calculations required per question part and hundreds and tens columns affected).

More resources which follow the same small steps as White Rose.

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Reasoning and Problem Solving – Subtract 1-digit From 3-digits

1a. Use these digit cards to write a subtraction sentence that equals 143.

1	5	8	4	=	–

D PS

1b. Use these digit cards to write a subtraction sentence that equals 656.

6	9	5	3	=	–

D PS

2a. Miles is subtracting 5 from 156.

Is Miles correct? Explain why.

D R

2b. Esther is subtracting 9 from 179.

Is Esther correct? Explain why.

D R

3a. Fill in the blanks using >, < or =.

149 – 6 ☐ 142

929 – 8 ☐ 919

256 – 5 ☐ 251

D PS

3b. Fill in the blanks using >, < or =.

396 – 4 ☐ 394

709 – 8 ☐ 701

457 – 3 ☐ 653

D PS

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Reasoning and Problem Solving – Subtract 1-digit from 3-digits

4a. Use these digit cards to write a subtraction sentence that equals 643.

1	8	6	5

E PS

4b. Use these digit cards to write a subtraction sentence that equals 856.

8	6	9	5

E PS

5a. Meghan is subtracting 5 from 651.

The answer will be 601.

Is Meghan correct? Explain why.

E R

5b. Harry is subtracting 9 from 472.

The answer will be 464.

Is Harry correct? Explain why.

E R

6a. Fill in the blanks using >, < or =.

145	–	6	☐	151	–	9
921	–	8	☐	919	–	6
254	–	5	☐	258	–	9

E PS

6b. Fill in the blanks using >, < or =.

391	–	8	☐	399	–	9
545	–	5	☐	547	–	8
871	–	2	☐	876	–	7

E PS

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Reasoning and Problem Solving – Subtract 1-digit from 3-digits

7a. Use four of these digit cards to write a subtraction sentence that equals 768.

7 4 7 5 7

GD PS

7b. Use four of these digit cards to write a subtraction sentence that equals 397.

2 5 0 7 4

GD PS

8a. Jenna is subtracting 5 from a 3-digit number that ends with 6.

The answer will always end with 9.

Is Jenna correct? Explain why.

GD R

8b. Freddie is subtracting an odd number from an odd 3-digit number.

The answer will always be odd.

Is Freddie correct? Explain why.

GD R

9a. Fill in the blanks using >, < or =.

295 – 6	☐	291 – 9	☐	298 - 7
684 – 9	☐	690 – 8	☐	685 – 3
806 – 4	☐	800 – 1	☐	799 – 4

GD PS

9b. Fill in the blanks using >, < or =.

972 – 6	☐	970 – 4	☐	974 – 8
401 – 9	☐	395 – 4	☐	399 – 6
709 – 6	☐	700 – 2	☐	710 – 9

GD PS

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Reasoning and Problem Solving – Subtract 1-digit from 3-digits

Developing

1a. 148 – 5 = 143
1b. 659 – 3 = 656
2a. No, he has subtracted 5 tens rather than 5 ones. His answer should be 151.
2b. No, she has subtracted 10 rather than 9 ones. Her answer should be 170.
3a. >, >, =
3b. <, =, >

Expected

4a. 651 – 8 = 643
4b. 865 – 9 = 856
5a. No, she has subtracted 5 tens rather than 5 ones. Her answer should be 646.
5b. No, he has subtracted 8 ones rather than 9 ones. His answer should be 463.
6a. <, =, =
6b. <, >, =

Greater Depth

7a. 775 – 7 = 768
7b. 402 – 5 = 397
8a. No, subtracting 5 from a 3-digit number ending in 6 results in a number ending with 1 because 6 – 5 = 1. Various calculations to prove the answer are possible. Examples include: 166 – 5 = 161, 116 – 5 = 111, 126 – 5 = 121.
8b. No, the answer will always be even. Various calculations to prove the answer are possible. Examples include: 145 – 1 = 144, 145 – 3 = 142, 145 – 5 = 140.

9a.

295 – 6	>	291 – 9	<	298 - 7
684 – 9	<	690 – 8	=	685 – 3
806 – 4	>	800 – 5	=	799 – 4

9b.

972 – 6	=	970 – 4	=	974 – 8
401 – 9	>	395 – 4	<	399 – 6
709 – 6	>	700 – 2	<	710 – 9

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