

Reasoning and Problem Solving

Step 8: Add and Subtract 100s

National Curriculum Objectives:

Mathematics Year 3: (3C1) [Add and subtract numbers mentally, including a three-digit number and hundreds](#)

Differentiation:

Questions 1, 4 and 7 (Reasoning)

Developing Match three addition and subtraction sentences to their correct answers and identify which answer is incorrect, involving adding and subtracting multiples of 100 to/from multiples of 100 up to 1,000.

Expected Match three addition and subtraction sentences to their correct answers and identify which answer is incorrect, involving adding and subtracting multiples of 100 to/from 3-digit numbers to 1,000.

Greater Depth Match three addition and subtraction sentences to their correct answers and identify which answer is incorrect, involving adding and subtracting multiples of 100 to/from any numbers to and beyond 1000 without exchanging.

Questions 2, 5 and 8 (Problem Solving)

Developing Find different calculations to equal a given number using multiples of 100 to 1000.

Expected Find different calculations to equal a given number using multiples of 100 and 3-digit numbers up to 1,000.

Greater Depth Find different calculations to equal a given number using multiples of 100 and numbers beyond 1,000.

Questions 3, 6 and 9 (Problem Solving)

Developing Solve and compare calculations involving adding and subtracting multiples of 100 to/from multiples of 100 to 1000.

Expected Solve and compare calculations involving adding and subtracting multiples of 100 to/from 3-digit numbers to 1000.

Greater Depth Solve and compare calculations involving adding and subtracting multiples of 100 to/from numbers beyond 1000.

[More resources](#) which follow the same small steps as White Rose.

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Reasoning and Problem Solving – Add and Subtract 100s

1a. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 400 to 300

900

b Subtract 200 from 800

700

c Subtract 500 from 900

400



R

1b. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 500 to 300

400

b Subtract 500 from 900

900

c Subtract 200 from 700

800



R

2a. Steph is finding different calculations to make a number by adding or subtracting multiples of 100.

My number is 300.



Steph

Give 3 possible calculations that would give this answer.



PS

2b. Kelly is finding different calculations to make a number by adding or subtracting multiples of 100.

My number is 700.



Kelly

Give 3 possible calculations that would give this answer.



PS

3a. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $300 + 300$ $800 - 200$

b. $200 + 500$ $800 - 200$

c. $500 + 300$ $900 - 200$



PS

3b. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $200 + 200$ $700 - 400$

b. $300 + 100$ $500 - 100$

c. $500 + 200$ $900 - 100$



PS

Reasoning and Problem Solving – Add and Subtract 100s

4a. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 400 to 465

388

b Subtract 200 from 298

865

c Subtract 600 from 988

198



R

4b. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 600 to 378

183

b Subtract 800 from 983

978

c Subtract 500 from 629

229



R

5a. Johnny is finding different calculations to make a number by adding or subtracting a multiple of 100.

My number is 526.



Johnny

Give 3 possible calculations that would give this answer.



PS

5b. Josh is finding different calculations to make a number by adding or subtracting a multiple of 100.

My number is 875.



Josh

Give 3 possible calculations that would give this answer.



PS

6a. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $354 + 300$

$845 - 200$

b. $295 + 500$

$895 - 100$

c. $543 + 300$

$934 - 100$



PS

6b. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $245 + 200$

$745 - 300$

b. $344 + 100$

$545 - 100$

c. $509 + 200$

$990 - 200$



PS

Reasoning and Problem Solving – Add and Subtract 100s

7a. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 800 to 425

999

b Subtract 802 from 1,002

200

c Subtract 600 from 1,699

1,225



R

7b. Match the question to the correct answer. Which is the incorrect answer? Explain how you know.

a Add 500 to 504

1,090

b Subtract 200 from 1,190

1,124

c Subtract 500 from 1,624

1,004



R

8a. Lucy is finding different calculations to make a number by adding or subtracting a multiple of 100.

My number is 1,165.



Lucy

Give 3 possible calculations that would give this answer.



PS

8b. Chuan is finding different calculations to make a number by adding or subtracting a multiple of 100.

My number is 1,045.



Chuan

Give 3 possible calculations that would give this answer.



PS

9a. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $769 + 300$ $1,296 - 200$

b. $985 + 500$ $1,585 - 100$

c. $755 + 300$ $1,200 - 100$



PS

9b. Solve the calculations then add in the missing symbol using $<$, $>$ or $=$.

a. $945 + 200$ $1,454 - 300$

b. $838 + 100$ $1,045 - 100$

c. $875 + 400$ $1,475 - 200$



PS

Reasoning and Problem Solving – Add and Subtract 100s

Developing

- 1a. $a = 700$, $c = 400$, b is incorrect; the answer is 600.
- 1b. $a = 800$, $b = 400$, c is incorrect; the answer is 500.
- 2a. Various answers, for example: $100 + 200$, $200 + 100$, $500 - 200$, $700 - 400$
- 2b. Various answers, for example: $300 + 400$, $200 + 500$, $900 - 200$, $800 - 100$
- 3a. $600 = 600$, $700 > 600$, $800 > 700$
- 3b. $400 > 300$, $400 = 400$, $700 < 800$

Expected

- 4a. $a = 865$, $c = 388$, b is incorrect; the answer is 98.
- 4b. $a = 978$, $b = 183$, c is incorrect; the answer is 129.
- 5a. Various answers, for example: $126 + 400$, $226 + 300$, $626 - 100$, $926 - 400$
- 5b. Various answers, for example: $175 + 700$, $575 + 300$, $975 - 100$, $1,075 - 200$
- 6a. $654 > 645$, $795 = 795$, $843 > 834$
- 6b. $445 = 445$, $444 < 445$, $709 < 790$

Greater Depth

- 7a. $a = 1,225$, $b = 200$, c is incorrect; the answer is 1,099.
- 7b. $a = 1,004$, $c = 1,124$, b is incorrect; the answer is 990.
- 8a. $965 + 200$, $165 + 1,000$, $1,265 - 100$, $1,565 - 400$
- 8b. $45 + 1,000$, $545 + 500$, $1,245 - 200$, $1,545 - 500$
- 9a. $1,069 < 1,096$, $1,485 = 1,485$, $1,055 < 1,100$
- 9b. $1,145 < 1,154$, $938 < 945$, $1,275 = 1,275$