

# Reasoning and Problem Solving

## Step 6: Adding and Subtracting 1s

### National Curriculum Objectives:

Mathematics Year 2: (2C1) [Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100](#)

Mathematics Year 2: (2C2a) [Add and subtract numbers mentally, including: a two-digit number and ones](#)

Mathematics Year 2: (2C3) [Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems](#)

### Differentiation:

Questions 1, 4 and 7 (Reasoning)

**Developing** Identify and explain common errors when adding and subtracting 1's (numbers up to 20).

**Expected** Identify and explain common errors when adding and subtracting 1's (numbers up to 50).

**Greater Depth** Identify and explain common errors when adding and subtracting 1's (numbers up to 100).

Questions 2, 5 and 8 (Reasoning)

**Developing** Identify and explain the odd one out when adding and subtracting 1's (numbers up to 20).

**Expected** Identify and explain the odd one out when adding and subtracting 1's (numbers up to 50).

**Greater Depth** Identify and explain the odd one out when adding and subtracting 1's (numbers up to 100).

Questions 3, 6 and 9 (Problem Solving)

**Developing** Choose the correct symbol to make the calculation correct (numbers up to 20).

**Expected** Choose the correct symbol to make the calculation correct (numbers up to 50).

**Greater Depth** Choose the correct symbol to make the calculation correct (numbers up to 100).

More [Year 2 Addition and Subtraction](#) resources.

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# Reasoning and Problem Solving – Adding and Subtracting 1s

1a. Zamil thinks he has completed his calculation correctly. Is he correct? Explain why.

$$13 - 2 = 11$$



R

1b. Lydia thinks she has completed her calculations correctly. Is she correct? Explain why.

$$6 + 3 = 3$$



R

2a. Which calculation is the odd one out and why?

$$18 - 2 = 16$$

$$10 + 6 = 16$$

$$12 + 5 = 16$$



R

2b. Which calculation is the odd one out and why?

$$5 + 4 = 9$$

$$7 - 2 = 9$$

$$1 + 8 = 9$$



R

3a. Insert the correct symbols into the boxes.

a)  $17 \square 3 = 14$

b)  $4 \square 5 = 9$



PS

3b. Insert the correct symbols into the boxes.

a)  $9 \square 2 = 7$

b)  $12 \square 6 = 18$



PS

# Reasoning and Problem Solving – Adding and Subtracting 1s

4a. Charlie thinks he has completed his calculation correctly. Is he correct? Explain why.

$$37 + 4 = 33$$



R

4b. Ava thinks she has completed her calculations correctly. Is she correct? Explain why.

$$40 - 4 = 44$$



R

5a. Which calculation is the odd one out and why?

$$44 + 4 = 48$$

$$44 - 4 = 48$$

$$43 + 5 = 48$$



R

5b. Which calculation is the odd one out and why?

$$28 - 3 = 25$$

$$22 + 5 = 25$$

$$29 - 4 = 25$$



R

6a. Insert the correct symbols into the boxes.

a)  $29 \quad \square \quad 4 = 25$

b)  $44 \quad \square \quad 5 = 49$



PS

6b. Insert the correct symbols into the boxes.

a)  $37 \quad \square \quad 4 = 33$

b)  $21 \quad \square \quad 5 = 26$



PS

# Reasoning and Problem Solving – Adding and Subtracting 1s

7a. Ahmed thinks he has completed his calculation correctly. Is he correct? Explain why.

$$84 + 2 = 82$$



R

7b. Poppy thinks she has completed her calculation correctly. Is she correct? Explain why.

$$67 - 4 = 63$$



R

8a. Which calculation is the odd one out and why?

$$70 + 6 = 76$$

$$72 - 4 = 76$$

$$78 - 2 = 76$$

$$72 + 4 = 76$$



R

8b. Which calculation is the odd one out and why?

$$94 - 4 = 98$$

$$95 + 3 = 98$$

$$99 - 1 = 98$$

$$94 + 4 = 98$$



R

9a. Insert the correct symbols into the boxes.

a)  $63$    $4 = 67$

b)  $84$    $2 = 82$

c)  $78$    $5 = 73$



PS

9b. Insert the correct symbols into the boxes

a)  $98$    $4 = 94$

b)  $50$    $9 = 59$

c)  $59$    $3 = 56$



PS

# Reasoning and Problem Solving – Adding and Subtracting 1s

## Developing

- 1a. Zamil is correct.
- 1b. Lydia is incorrect. She has used subtraction instead of addition.
- 2a. The odd one out is  $12 + 5 = 16$ , as the calculation is not correct. The other calculations are correct.
- 2b. The odd one out is  $7 - 2 = 9$ , as the calculation is not correct. The other calculations are correct. If an addition symbol was used then the calculation would have been correct.
- 3a. a) – b) +
- 3b. a) – b) +

## Expected

- 4a. Charlie is not correct. He has used subtraction instead of addition.
- 4b. Ava is not correct. She has used addition instead of subtraction.
- 5a. The odd one out is  $44 - 4 = 48$ . The calculation is not correct, however if the subtraction symbol was an addition symbol, the calculation would be correct.
- 5b. The odd one out is  $22 + 5 = 25$ , as the calculation is not correct.
- 6a. a) –, b) +
- 6b. a) –, b) +

## Greater Depth

- 7a. Ahmed is incorrect. He has used subtraction instead of addition.
- 7b. Poppy is correct.
- 8a. The odd one out is  $72 - 4 = 76$ . The calculation is not correct, however if the subtraction symbol was an addition symbol, the calculation would be correct.
- 8b. The odd one out is  $94 - 4 = 98$ . The calculation is not correct, however if the subtraction symbol was an addition symbol, the calculation would be correct.
- 9a. a) +, b) –, c) –
- 9b. a) –, b) +, c) –