

Addition and Subtraction Unit 4

Problem solving and reasoning: Questions

Year 2

Complete this addition grid:

| | | |
|----|----|----|
| + | 20 | |
| | 54 | |
| 67 | | 97 |

Explain what Bill has done wrong in his homework:

54 + 40 = 84
76 - 30 = 73
23 + 50 = 28
64 - 40 = 20

Choose a number to write in the first empty box:

$$[\] + 20 - 30 + 10 = [\]$$

Do the calculation. Make an observation about the answer.

Repeat with a different starting number.

Explain what is happening.

These questions should be provided for children to do once the unit has been completed. They assess the children's mastery of the skills and concepts in this unit.

Year 3

Complete the missing numbers:

$$[\] + 108 = 148$$

$$238 - [\] = 38$$

$$[\] + 40 = 846$$

Start with 789. Write 3 different subtractions to get a final answer of 500.

How would these change if you wanted a final answer of 499?

Add 80 to 263 then subtract 1.

How much bigger is your answer than 263?

These questions should be provided for children to do once the unit has been completed. They assess the children's mastery of the skills and concepts in this unit.

Addition and Subtraction Unit 4

Problem solving and reasoning: **Answers**

Year 2

Complete this addition grid:

| | | |
|----|----|----|
| + | 20 | 30 |
| 34 | 54 | 64 |
| 67 | 87 | 97 |

Explain what Bill has done wrong in his homework:

54 + 40 = 84
76 - 30 = 73
23 + 50 = 28
64 - 40 = 20

Answers should be 94, 46, 73 and 24 respectively. In the first question he has counted on in 10s including 54 as the first count. In the others he has taken the 10s number as if a 1. So, subtracting 3 from 76 rather than 30, adding 5 to 23 rather than 50 and subtracting 4 from the 10s of 64 rather than 40.

Choose a number to write in the first empty box:

e.g. $6 + 20 - 30 + 10 = 6$

Do the calculation. Make an observation about the answer.

Repeat with a different starting number.

Explain what is happening.

The answer is always the same as the number chosen for the first box. This happens because 30 has been added and 30 subtracted each time.

These questions should be provided for children to do once the unit has been completed. They assess the children's mastery of the skills and concepts in this unit.

Year 3

Complete the missing numbers:

$$40 + 108 = 148$$

$$238 - 200 = 38$$

$$806 + 40 = 846$$

Children should be using place value understanding to solve these – check through with place value cards if they are struggling.

Start with 789. Write 3 different subtractions to get a final answer of 500.

How would these change if you wanted a final answer of 499?

$$789 - 200 - 80 - 9 = 500.$$

To get a final answer of 499, 1 more must be subtracted. This can be achieved by $789 - 200 - 80 - 10$ or $789 - 200 - 90$.

Add 80 to 263 then subtract 1.

How much bigger is your answer than 263?

342. The answer is 79 bigger. Some may answer 81, simply adding the 80 and 1.

These questions should be provided for children to do once the unit has been completed. They assess the children's mastery of the skills and concepts in this unit.