Addition Prior Learning Assessment : Question 4, 5, 6 and 9

LO: I can use a formal written method to add sets of numbers together

Q9: I can solve missing box problems involving addition (mastery)

NC: NAS 1: add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

NAS 3: use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Teacher Input Ideas:

Around the room scatter different 4, 5 and 6 digit numbers. Children could select options of adding these together.

Model to the children estimating what the answer will be close to and encourage children to discuss why approximation is useful. Model the thought process and rounding to help with this. Discuss whether you should round to the nearest thousand, ten thousand etc. when looking at a variety of examples.

Model adding 2 lots of 4 digit amounts together using the formal written method. Model carrying amounts once a new ten, hundred, thousand etc. has been made, ensuring that children can explain the process and why we carry different numbers. If children are using vocabulary such as carry the 1, ensure that they know that this is worth 1 ten, 1 hundred, etc. Children could also write above the columns place value titles if this helps.

Model using amounts that have a mixture of 4, 5 and 6 digits so that the children need to think about place value and laying out the sum accurately.

Practice Activities

Purple Practice: Most suited for children that made errors in Question 4 and 5 of the Addition Prior Assessment Task

The purple activity provides the opportunity for the children to add 2 and 3 lots of four digit amounts. The children can concentrate on adding amounts where new tens, hundreds and thousands are made. Children should also be encouraged to estimate what the answer will be when the amounts are added together encouraging the children to use approximation to check their answers,

Additionally, NPV1 opportunity: children could write their answers in words rather than digits once they have worked it out.

<u>Green Practice:</u> Most suited for children who demonstrate errors in Question 6 of the prior learning assessment and will benefit from securing adding different amounts of digits together.

For this activity, the children are required to estimate what the answer will be by using rounding. They should be encouraged to use rounding to check that their answers are realistic. The questions in the task require the children to add different 4, 5 and 6 digit amounts using formal column addition. The children will need to apply their knowledge of place value to ensure that the amounts have been laid out properly. Children could label columns or use squared paper if they are having difficulty here. A further challenge could also be children to write the total of the sums in words to apply previously taught place value skills (NPV1)

<u>Yellow Practice</u> Most suited for children who demonstrated a good understanding in Question 4, 5 and Question 6

This activity requires the children to approximate which sets of numbers will reach the target number when added together and to explore different combinations. The children are applying approximating and the use of written strategies together to find the closest possible answer to 40,000. The children will spot obvious pairings such as 25621 and 15092 to reach the total, Encourage the children to try adding 3 or 4 sets of numbers together to find the closest answer. The children may suggest working systematically through the combinations too or ruling out possibilities from the outset by using their knowledge of approximation.

<u>Mastery</u> : most suited for children who made errors in Question 9 of the prior learning assessment.

For this mastery task, the children are presented with addition sums where there are missing boxes for the children to work out . Encourage the children to suggest if the inverse operation can be used or whether they need to work how many more is needed for each part of the sum. The children are also presented with trickier questions, where carrying tens or ones has occurred so encourage the children to spot when this has happened.

Answers

Purple:

1) 9954 2) 8939 3) 9909

4) 15219 5) 11811 6) 14921

Green :

1) 584551 2) 71124 3) 17022

4) 570175 5) 31031 6) 106139

Yellow:

Suggested combinations:

30703 + 8201 = 38904

25621 + 15092 = 40713

24653+ 7801 + 8201 = 40654

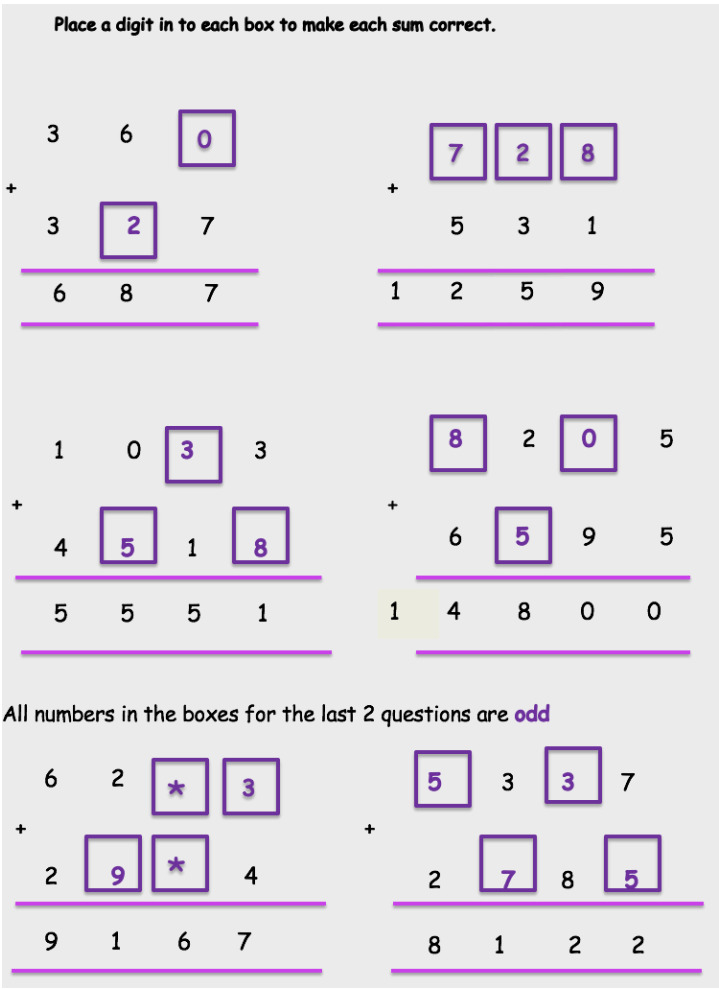
20953+ 15092+5325 = 41370

8201+7801+25621 = 21623

24653+15092 = 39745

15092+5325+12484+7801 = 40702

Mastery



* accept here either 5 and 1 (in any box) or 3 and 3.

BRICKWORK Mathematics

Purple Activity

Lo: I can use a written method to add 4 digit amounts together.

Look at the amounts on each block. Estimate what the answer will be when the two amounts are added together. Use a written method to add the amounts.

1.

2.

3.

4.

5.

6.

Challenge: can you explain to a partner how you worked out the answer to each question?

BRICKWORK Mathematics

Green Activity

Lo: I can use a written method to add amounts with different amounts of digits

Add each of the amounts together and estimate what the answer will be first to check that your answer is realistic.

1. 22367 + 562184 =

2. 13546 + 25436 + 32142 =

3. 4352 + 12670 =

4. 87432 + 482743 =

5. 23671 + 5432 + 1928 =

6. 52427 + 52432 + 1280 =

Challenge: add together
four hundred and five thousand, two hundred and twelve
three hundred and fifty-four thousand and seventy
ninety-six thousand, three hundred and forty-eight

Yellow Activity

Lo: I can use a written method to add different amounts together.

1. Explore adding different amounts together to give you an answer closest to the total of:

40,000

8201 | 25621 | 24653 | 7801 | 20953

12484 | 15092 | 30 703 | 5325

Tip: You may want to explore adding 2, 3, and 4 sets of numbers to see which options give you the closest to the target.

How can estimating help you here?

How can you prove you have found the closest answer to 40,000?

2. Add the different amounts together and write the answers in words.

Fifty-four thousand, three hundred and nineteen

One hundred and forty thousand, eight hundred and fifty-five.

Two hundred and three thousand, eight hundred and sixty

BRICKWORK Mathematics

Mastery

Place a digit in to each box to make the sum correct.

$$\begin{array}{r} 3\ 6\ \square \\ +\ 3\ \square\ 7 \\ \hline 6\ 8\ 7 \end{array}$$

$$\begin{array}{r} \square\ \square\ \square \\ +\ 5\ 3\ 1 \\ \hline 1\ 2\ 5\ 9 \end{array}$$

$$\begin{array}{r} 1\ 0\ \square\ 3 \\ +\ 4\ \square\ 1\ \square \\ \hline 5\ 5\ 5\ 1 \end{array}$$

$$\begin{array}{r} \square\ 2\ \square\ 5 \\ +\ 6\ \square\ 9\ 5 \\ \hline 1\ 4\ 8\ 0\ 0 \end{array}$$

All numbers in the boxes for the last 2 questions are **odd**

$$\begin{array}{r} 6\ 2\ \square\ \square \\ +\ 2\ \square\ \square\ 4 \\ \hline 9\ 1\ 6\ 7 \end{array}$$

$$\begin{array}{r} \square\ 3\ \square\ 7 \\ +\ 2\ \square\ 8\ \square \\ \hline 8\ 1\ 2\ 2 \end{array}$$