Addition Prior Test: Question 3 and Question 6
Objective: I can use a written method to add sets of numbers together
 Q6: I can use approximation to estimate the answer to an addition sum.
NC: NASMD 8: solve problems involving addition
NC: NASM D9: Use approximation to check answers to calculations

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 (point out Q6 from Prior Assessment). Discuss whether you should round to the nearest thousand, ten thousand etc. when looking at a variety of examples.

Model adding 3 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 3 of the Addition Prior Assessment Task**

The purple activity provides the opportunity for the children to add 3 amounts together at a time and encourages the children to think about place value when adding numbers with different amounts of digits.

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

Green Practice: Most suited for children who could answer **Question 3** but showed difficulty with answering **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. Additionally, children who need to develop their use of language to explain their thought process when using a written method would benefit too.

Yellow Practice Most suited for children who demonstrated a good understanding in **Question 3 and Question 6** and you are happy that they can efficiently add sets of numbers. If you feel it would be beneficial, children could also apply their approximating skills to this activity.

Additionally, there is a fluency opportunity for this activity. From the year 5 curriculum, children should have a written or mental strategy for multiplication so this could be applied in this task. Or this task could also provide an opportunity for children to secure addition skills by repeatedly adding amounts for the x questions. Children could also explore different methods and discuss which one is the most efficient.

Mastery Encourage the children to think about a starting point for the problem. They may want to discuss what they know about adding odd digits. If the children are finding it difficult, prompt through questions such as:

- What do you know about adding odd digits together?
- What happens when an odd and an odd number is added together?
- How could the 2 have been created in the units/ones column?
- Now look at the tens column. Is it possible to create the 7 by adding 2 odd digits? What does this tell us?

Answers

Purple Task: Q1: **6674**   Q2: **58226**   Q3: **27012**

Q4: **121477**   Q5: **109342**   Q6: **178,692**

Green Task: open ended answers children could mark with a friend and discuss options that are close to the target totals and could use a calculator to check written addition. 2) Explanation to point out that Joel has laid out the question wrong without using his understanding of place value when adding the amounts. He has not used his estimate to check his working out and when explaining how he has carried amounts over he did not use vocabulary such as 2 thousand.

Yellow Task: Q1: **True**   Q2: **False**   Q3: **True**   Q4: **False**

Q5: **False**   Q6: **True**

Mastery: Encourage children to find a variety of answers. Some possibilities are:

57337	57359	35139	37155
+ 17135	+17113	+39333	+37317

BRICKWORK
Mathematics

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

1.

| 3562 | 1734 | 1378 |

2.

| 13782 | 12311 | 32133 |

3.

| 9648 | 9093 | 8271 |

4.

| 67929 | 21090 | 32458 |

5.

| 5678 | 90817 | 12847 |

6.

| 70198 | 6732 | 101762 |

<u>Green Practice</u>

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:

60,000

9201	25621	24653	7801	20953

12484	15092	48703	30621

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?

2. Joel is explaining how he has added 4567, 12984 and 3472 together. Find the 3 errors he has made in his working out and explanation and correct them for him.

There is no zero here so I will just add the 4 and the 7.

```
  4 5 6 7
1 2 9 8 4
  3 4 7 2
─────────
5 2 2 7 1
1 2 1 1
```

I estimated that the answer would be 21,00 but it doesn't matter that my answer is much larger.

5 + 9 + 7 = 22 so, I carry 2 into the next column.

Practice Yellow

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

BRICKWORK
Mathematics

Are these statements true or false?

Tip: secure your adding skills by repeatedly adding the amounts for the x sums.
Or do you know a written method for x by 4 digit numbers?

1. $4512 \times 3 = 9458 + 4078$

2. $4586 \times 5 = 12908 + 6788$

3. $78975 + 24567 = 3 \times 34514$

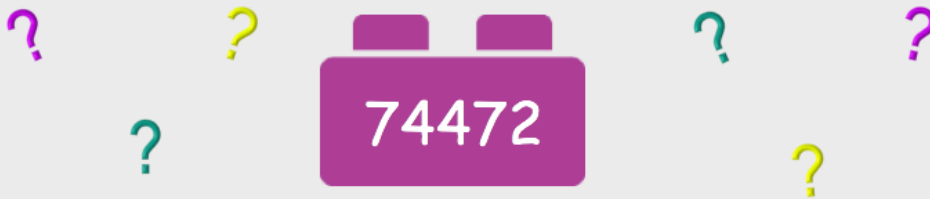4. $102{,}694 + 21645 = 13{,}908 \times 4$

5. $4567 \times 8 = 37987 + 20090$

6. $105\,800 \times 4 = 105781 + 317419$

Extension: can you think of three of your own equations for a friend to answer?

Mastery

Lo: to select relevant skills to solve a problem.

Two 5 digit numbers which use only odd digits are added together to make this total:

? **?** **74472** **?** **?**

? **?**

What are the amounts that are added?

Thinking points :
- What do you know about adding odd and even numbers?
- How can you start to investigate?
- Is there only one answer?