Addition Prior Test: Question 4

Objective: I can add sets of numbers that contain decimals

NC NASMD:8 I can solve addition problems.

Teacher Input Ideas:

Set up a shop in the classroom to engage children and to give a purpose as to why there is a need to add decimals. Place items in there with different amounts. Ensure there is a variety of prices such as 2, 3 and 4 digit numbers with decimals to 2 places. Ensure that there are some price tags with zero used in different places as a place holder. (Examples: £22.09, £40.56, £101.10, £12.99). Items could be selected by children to add together to be bought. Alternatively, magazines or catalogues could be used.

Build on the children's understanding of approximating and encourage children to discuss why approximation is useful when purchasing products.

This may also be a good opportunity to discuss when mental methods would be useful too. Such as £1.99 + £1.99. Discuss how £2 could be used to perform this mentally. How could 2.99 x 5 be performed quickly?

Model adding amounts when a written method is needed. Discuss layout and the purpose of the decimal point. Once children are confident with adding amounts with 2 decimal places, provide children with opportunities to add numbers with different amounts of decimal places. Examples: 2.09 and 7.9, 70.001 and 0. 82

Practice Activities

Purple Practice: Most suited for children that made errors in **Question 4 of the Addition Prior Assessment Task** and need to focus on adding amounts with only 2 decimal places.

Practical Provide children with a budget that they can spend in the shop (for example, £50.00). Children to approximate which items they could buy/add together and then work out the total for these combinations by using a written method where needed to add amounts. Different budgets could be given and when children are confident you will want to provide opportunities for adding numbers with different amounts of decimal places.

Green Practice: Most suited for children **who can add 2 or 3 amounts** together however make errors when adding numbers with different amounts of decimal places. This activity provides the opportunity to explore the purpose of the decimal point and to decide whether the sum can be performed mentally or if a written method is needed.

Yellow Practice Most suited for children who demonstrated a good understanding in **Question 4** and you are happy that they can efficiently add sets of numbers with decimals.

This activity is practical and can be completed in pairs. Children to cut out the cards and explore different number sentences that can be made using <> and + symbols. This also provides children with the opportunity to use greater and less than language accurately with the symbols. Once children have completed a sentence encourage children to read it aloud. Children may need to perform written calculations in books but some calculations can be calculated mentally.

Mastery Children to explore the combinations that will make each number sentence correct. Encourage children to also think about how they will tackle the problem and the strategies they use. Some children may benefit from cutting out the blocks so that they can be physically moved around.

Key questions

- Can you spot any relationships with some of the numbers?
- Where will you start?
- Will working systematically help in this problem?

Answers

Green Task

Q1: **16.01 (mental)** Q2: **4.34** Q3: **118.481**

Q4: **1.88 (mental)** Q5: **22.621** Q6: **0.6 (mental)**

Yellow Task: Open ended. Children may want to mark these and discuss together in other groups so that they can talk about their findings and reason their choices.

Mastery:

0.5 + 0.36 + 0.14 = 1

0.2 + 0.1 + 0.75 >1 or 0.25 + 0.1 + 0.75 > 1 or 0.01 + 0.75 + 0.25 > 1

0.25 + 0.33 + 0.01 < 1 or 0.33 + 0.01 + 0.2 < 1 or 0.2 + 0.33 + 0.1 < 1

BRICKWORK Mathematics

Green Practice

Lo: I can select a method to use to add amounts with decimal places.

Approximate what the answer will be to each sum and then work out the answer either mentally or using a written method.

1. 1.99 + 2.01 + 12.01 =

2. 00.9 + 1.99 + 1.45 =

3. 10.001 + 7.5 + 100.98 =

4. 1.0 + 0.8 + 0.08 =

5. 2.5 + 2.101 + 18.02 =

6. 0.2 + 0.20 + 0.200 =

Which questions were easily calculated mentally? Why?

BRICKWORK Mathematics

Practice Yellow:

Lo: I can select a method to use to add numbers with decimal places.

Cut out the cards and explore what different number sentences you can make. Example: **0.98 + 6.83 > 7.09**

0.98	>
6.83	+
7.09	<
8.089	5.5

BRICKWORK Mathematics

Practice Yellow sheet 2

00.001	16.4
16.402	12.91
3.12	7.9
34.21	10.4

BRICKWORK Mathematics

Mastery:

Below are 9 number blocks. Each number block needs to be placed in a box below to make each number sentence correct. Each number block can only be used once.

0.25 | 0.5 | 0.01 | 0.33 | 0.75

0.1 | 0.36 | 0.2 | 0.14

□ + □ + □ = 1

□ + □ + □ > 1

□ + □ + □ < 1