

### Subtraction Prior Assessment Questions 9 and 10 .

**LO:** I can subtract a decimal number from another decimal number  
I can subtract a decimal amount from a whole number.

**NC:** NAS 1: add and subtract using formal written methods.

**NAS 4:** Solve addition and subtraction multi-step problems in contexts, deciding which operation and methods to use and why.

**NFDP 10:** solve problems involving amounts up to 3 decimal places.

#### Teacher Input Ideas:

Encourage the children to suggest when we use decimals, why they are needed and suggest examples of where they can be found. Introduce that often decimals are used for money and measurements. You may want to use one of these examples to introduce subtracting with decimals.

Children to be given lengths of pipes, ribbons or paper. Children to measure the length of the ribbon/pipe and record this down in metres. For example, 0.93m, 2.67 (this also provides an opportunity to assess measuring skills or apply measuring skills)



2.93 metres

Inform the children that you would like to find out the difference between some of the lengths of pipe/ ribbon. Take suggestions from the children as to how you may do this. Ask children to work out the difference in length by completing subtraction sums.

For example:  $5.67\text{m} - 2.53\text{m} =$

Model using knowledge of place value to ensure that the amounts align at the decimal point. Encourage children to talk through how they have performed the written method using vocabulary such as decomposition, hundreds, tens.

Then select two lengths that have different amounts of decimal places. Such as  $3.09 - 1.9\text{m}$ . Encourage the children to explain how they have worked out the answer and watch out for any children who still have difficulty with exchanging.

When children are secure with this, explore different sums and model when you need to take amounts away from a whole numbers such as  $9\text{m} - 7.82\text{m}$  (you may want to discuss 2dp and 3dp in relation to cm and mm). Model how you will lay this out and calculate the answer. Discuss how you know that 9 m is the same as 900cm and how this can be useful. Also you may want to model with examples of money. Such as  $\text{£}25 - \text{£}4.79$ .

## Practice Activities

**Purple Practice: Most suited for children who made errors in Question 9 of the prior assessment task and will benefit from subtracting decimal amounts to 2 decimal places using practical equipment to support.**

The activity sheet provides children with the sums pre laid out so that they can apply skills of using a formal subtraction method and gradually apply the use of exchanging. Additionally, all questions include 2 decimal places so you can introduce the context of money.

On the second purple sheet, a place value grid can be found so that the children can place coins/notes into each part of the grid, if they need help to understand the value or to practically exchange different amounts if they are finding the first sheet tricky on its own. The children can be encouraged to use 1ps for the hundredths, ten pence's for the tenths, 1 pounds for the ones and then pound notes for the tens. Discuss the use of the decimal terms and the relationship with money.

**Green Practice: Most suited for children who made errors in Question 9 of the prior learning assessment and will benefit from applying skills of exchanging when performing the calculations.**

The activity sheet requires the children to use the written subtraction method to subtract decimal amounts from other decimal amounts. It also provides the opportunity for children apply skills of exchanging and subtracting from a zero. Question 9 can be performed mentally. Children should spot this and perform this without using a written method (efficiency and fluency).

As the questions get harder, the children are also required to tackle sums where they have different numbers of decimal places and will need to ensure that they use their knowledge of place value to help.

**Yellow Practice Most suited for children who made errors in Question 10 due to their understanding of subtracting decimals from whole amounts.**

Practical activity: Set up a shop displaying a variety of items with price tags such as the ones found on the yellow task sheet. Provide the children with different wallets and purses with whole amounts in them such as:

£15	£24	£56	£68
£70	£90	£100	

Encourage the children to work out how much change they will receive if they purchased one of the items. Encourage the children to use written methods (where needed) to subtract the decimal amount from the whole amount. Such as  $15 - 4.08$ .

Encourage the children to generate different sums by purchasing different items and starting with different purse/wallets.

A further challenge could be that the children find as many items they can to buy with the money in their wallet.

**Mastery:** Word Problems like in Question 10 of the prior learning assessment.

The word problems require the children to select the key information and understand which operations are needed. Some of the questions require the children to apply the subtraction skills they have been securing and some require the children to perform more than one operation to retrieve the answer. Additionally, the questions provide the opportunity for addition, place value and measure skills to be applied.

**Answers:**

**Purple:**

- |          |          |          |
|----------|----------|----------|
| 1) 2.15  | 2) 3.12  | 3) 6.14  |
| 4) 2.87  | 5) 2.34  | 6) 7.88  |
| 7) 83.16 | 8) 67.56 | 9) 39.28 |

**Green:**

- |           |           |           |
|-----------|-----------|-----------|
| 1) 9.57   | 2) 6.47   | 3) 4.02   |
| 4) 43.30  | 5) 179.07 | 6) 759.2  |
| 7) 22.438 | 8) 62.23  | 9) 890.78 |
| 10) 5.97  |           |           |

**Mastery:**

- 1) £88.55
- 2) 1642 or 1.642 km
- 3) £23.50
- 4) £45,113

Work out the answer to each sum.

1)

$$\begin{array}{r} 4.69 \\ - 2.54 \\ \hline \\ \hline \end{array}$$

2)

$$\begin{array}{r} 8.37 \\ - 5.25 \\ \hline \\ \hline \end{array}$$

3)

$$\begin{array}{r} 12.84 \\ - 6.70 \\ \hline \\ \hline \end{array}$$

4)

$$\begin{array}{r} 0.25 \\ - 6.83 \\ \hline \\ \hline \end{array}$$

5)

$$\begin{array}{r} 12.61 \\ - 10.27 \\ \hline \\ \hline \end{array}$$

6)

$$\begin{array}{r} 15.48 \\ - 7.60 \\ \hline \\ \hline \end{array}$$

7)

$$\begin{array}{r} 90.50 \\ - 7.34 \\ \hline \\ \hline \end{array}$$

8)

$$\begin{array}{r} 72.09 \\ - 4.53 \\ \hline \\ \hline \end{array}$$

9)

$$\begin{array}{r} 50.04 \\ - 10.76 \\ \hline \\ \hline \end{array}$$

hundredths	
tenths	
ones	
tens	

Green Practice

Lo: I can subtract a decimal number from another decimal number

Work out the answers to the sums below:

1)  $12.89 - 3.32 =$

2)  $18.56 - 12.09 =$

3)  $17.92 - 13.90 =$

4)  $78.29 - 34.99 =$

5)  $190.09 - 11.02 =$

6)  $789.1 - 29.9 =$

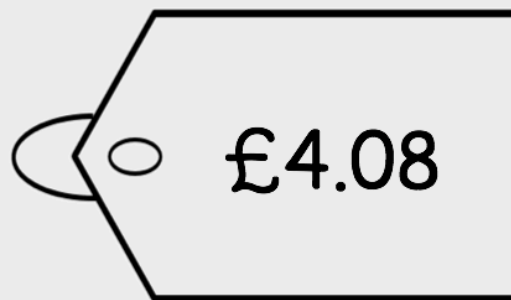
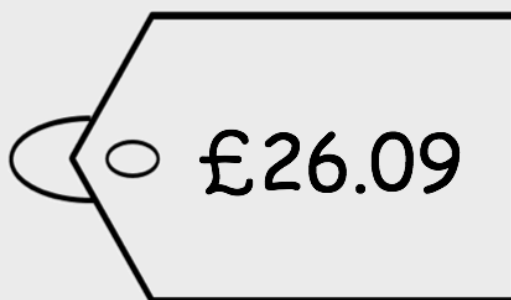
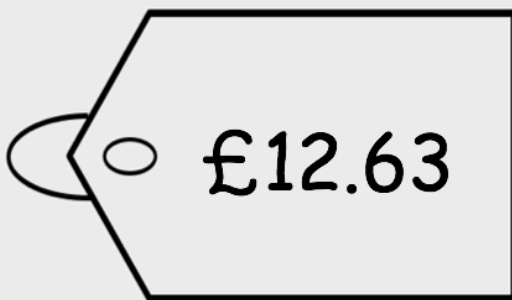
7)  $23.897 - 1.459 =$

8)  $63.9 - 1.67 =$

9)  $891.78 - 1 =$

10)  $10.87 - 4.9 =$

**Challenge:** can you think of 3 real life examples of when you might subtract decimals from each other?



**Mastery**

LO: I can select the operations I need solve word problems and perform calculations with accuracy.

**Look at the word problems below. Read the question carefully and pick out the key information. Decide which operations you need to use.**

1. Mrs Patel spends £125.05 at the supermarket for her weekly shop. Her eldest son, Daniyal, wants to pay for his food. His items cost £36.50.

How much does Mrs Patel spend on the rest of the family?

2. Stephen wants to run 9 kilometres in one week. He runs 3356 metres on Monday and 4002 metres on Thursday. How many more metres does he need to run to achieve his target?



**Challenge:** Can you record the answer in kilometres?

3. It cost Mr Potter £32 for 4 tickets to the farm for his 2 children, himself and his wife. For each child he paid £4.25 How much did it cost for himself and his wife?



**Challenge:** How much did it cost for one adult?

4. A car showroom sold cars for a total of £58827 in March. In April, they sold cars for a total of one hundred and three thousand, nine hundred forty pounds. How much more money did they receive in April?



**Challenge:** create your own word problem where 2 different operations are needed to calculate the answer.