

23.4.21

Decimals

Learning Objective:

We are learning to add decimals with a different number of decimal places.

I will be successful if:

- I can line up the decimal point when using a written column method.
- I can read and write different decimals up to 3d.p
- I can use estimation and reasoning to check my answer is sensible.

## Key Vocabulary

place value

decimal places

whole number

ones

tenths

hundredths

thousandths

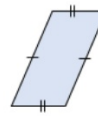
value

digit

# Flashback 4

Year 5 | Week 2 | Day 5

- 1) Work out  $5.2 - 3.4$
- 2) Add  $0.503$  to  $0.305$
- 3) Round  $5.107$  to the nearest tenth
- 4) Work out  $57 \times 24$



White  
Rose  
Maths

## Challenge

5)  $\pounds 18.39 =$

p

6)  $21\text{mm} =$

cm

7)  $8,300\text{m} =$

km

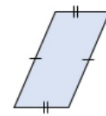
8)  $165\text{p} =$

£

# Flashback 4

Year 5 | Week 2 | Day 5

- 1) Work out  $52 - 34$       18
- 2) Add 0.503 to 0.305      0.808
- 3) Round 5.107 to the nearest tenth      5.1
- 4) Work out  $57 \times 24$       1368



White  
Rose  
Maths

## Challenge

5)  $£18.39 = 1839p$

6)  $21mm = 2.1cm$

7)  $8,300m = 8.3km$

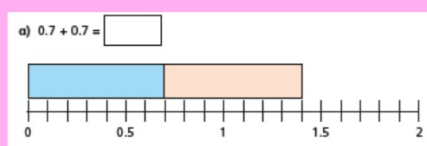
8)  $165p = £1.65$

Today, we will be using some of the same methods that we have been using all week.

Column method

	0	7	5	1	
+	0	3	2		
	.				

Number line



Place value grid

$0.86 + 0.68 =$

	Ones	Tenths	Hundredths
		8	6
+		6	8

Flexible partitioning to help with mental addition

$$\begin{array}{r}
 0.45 + 0.67 = \\
 \quad \quad \quad \swarrow \quad \searrow \\
 0.55 + 0.12 \\
 \hline
 0.45 + 0.55 + 0.12 = 1.12
 \end{array}$$

*How can you make this calculation easier to complete?*

$$\begin{array}{r} 4.4 \\ + 7.044 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4.42 \\ + 1.6 \\ \hline \\ \hline \end{array}$$

When your numbers have a different number of decimal places line up the decimal points to help you.

Ones	Tenths	Hundredths
1	0.1 0.1 0.1	
1 1 1	0.1 0.1 0.1 0.1 0.1	0.01 0.01

$$\begin{array}{r}
 1.3 \\
 + 3.52 \\
 \hline
 \hline
 \end{array}$$

*I think 1.5 is a sensible estimate for  $1.3 + 1.32$ .*



*Do you agree with Eva? Explain your reasoning.*



*What method would you use to solve this problem?*

*What would be a sensible estimate for this answer?*

Whitney is cycling in a race.

She has cycled 3.145 km so far and has 4.1 km left to go. What is the total distance of the race?

True or False ?

Adding decimals with a different number of decimal places

$$24.3 + 2.43$$

I should line up the digits, one below the other, in columns.



23.4.21

Adding decimals with different number of decimal places

## Reasoning challenges

Eva is trying to find the answer to



$$4.144 + 1.4$$

Here is her working out.

$$\begin{array}{r} 4.144 \\ + \quad 1.4 \\ \hline 4.248 \end{array}$$

Can you spot and explain her error?

Work out the correct answer.

Place the calculations in the correct column in the table.

$$9.99 + 0.1$$

$$9.99 + 1$$

$$9.99 + 0.001$$

$$9.99 + 0.01$$

Some calculations might need to go in more than one place.

No exchange	Exchange in the ones column	Exchange in the tenths column	Exchange in the hundredths column	Exchange in the thousandths column

Add 2 more calculations to each column.