Adding & Subtracting Decimals

Decimals are a way of expressing numbers that are a **portion of a whole**.

A **decimal number** is a number that contains decimals, such as **2.315**. We use a **decimal point** to separate any whole numbers (**2**) from any decimals (**0.315**).

Ones	.	Tenths	Hundredths	Thousandths
1 1	.	0.1 0.1 0.1	0.01	0.001 0.001 0.001 0.001 0.001
2	.	3	1	5

The Column Method

Let's use column addition to add 0.473 and 1.24 together!

1 Line up the numbers by **place value**.

Remember! Make sure the decimal points of each number are lined up in the same column.

	O	.	T	H	Th
	0	.	4	7	3
+	1	.	2	4	

2 Add the numbers, column by column, **starting with the rightmost column**.

If there is an **empty space in the column**, use **zero** as a placeholder.

	O	.	T	H	Th
	0	.	4	7	3
+	1	.	2	4	**0**

→

	O	.	T	H	Th
	0	.	4	7	3
+	1	.	2	4	0
					3

3 Continue solving each column one by one, going left.

If the answer to the column is in the double digits, **exchange** 10 tenths for 1 whole, 10 hundredths for 1 tenth or 10 thousandths for 1 hundredth.

	O	.	T	H	Th
	0	.	4^{1}	7	3
+	1	.	2	4	0
				1	3

→

	O	.	T	H	Th
	0	.	4^{1}	7	3
+	1	.	2	4	0
			7	1	3

4 Bring down the **decimal point** to the answer so that it's in the same place as the decimals in the sum, then add together any **whole numbers**.

	O	.	T	H	Th
	0	.	4^{1}	7	3
+	1	.	2	4	0
		.	7	1	3

→

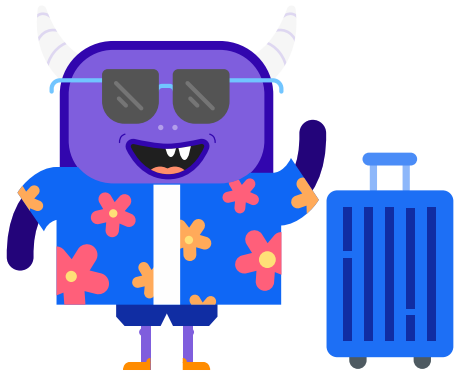
	O	.	T	H	Th
	0	.	4^{1}	7	3
+	**1**	.	2	4	0
	1	.	7	1	3

5 0.473 + 1.24 = **1.713**

We also use the column method to subtract decimal numbers.

Example Question

Ato wants to buy some things for their flight. They buy a bottle of water for £1.25, a magazine for £3, a snack for £2.50 and a souvenir.



If Ato spent £8.50, how much was their souvenir?

A £1.25 **B** £1.50 **C** £1.75 **D** £2 **E** £2.25

1 Start by **adding** together the cost of the water, magazine and snack.

Remember!
Line up the **decimal points** in each number and add '0' into any empty spaces!

	1	.	2	5	water
	3	.	0	0	magazine
+	2	.	5	0	snack
	6	.	7	5	

£1.25 + £3 + £2.50 = **£6.75**

2 **Subtract** this subtotal from the total amount of money that Ato spent.

	$^{7}\cancel{8}$	.	$^{14}\cancel{5}$	$^{1}0$	total
-	6	.	7	5	subtotal
	1	.	7	5	

£8.50 - £6.75 = **£1.75**

The correct answer is **C**. The souvenir cost £1.75.