1)

	2	.	6	5
+	3	.	2	2
	5	**.**	**8**	**7**

2) **a)**

	7	.	5	2
+	1	.	2	9
	8	**.**	**8**	**1**

b)

	6	5	.	8	3
+	3	1	.	4	5
	9	**7**	**.**	**2**	**8**

3) **5.93m**

1) **Ravi is wrong. The two measurements total 6.09m. Although there are 5 ones altogether, the decimal parts of the numbers add to more than 1.**

2) **In the first calculation, Frances has not aligned the decimal points before adding. In the second calculation, she has not understood that the decimal point is not a place value column.**
The corrected calculations are:

		4	**2**	**.**	**6**	**5**					**2**	**.**	**6**	**3**	
	+		**3**	**.**	**3**	**2**				**+**	**3**	**.**	**6**	**4**	
		4	**5**	**.**	**9**	**7**					**6**	**.**	**2**	**7**	
											1				

1) **David is correct.**

2.47 + 4.62 = 7.09 is the only possible answer.

2) **There are multiple solutions.**
Some solutions include:

2.43 + 1.03 = 3.46

1.43 + 2.03 = 3.46

3.24 + 1.04 = 4.28

1.24 + 3.04 = 4.28

Note: S must equal zero. R must be double T.

1) Use the place value chart to help you complete the calculation.

Ones	tenths	hundredths
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$

	2	.	6	5
+	3	.	2	2
		.		

2) Use the column method to solve these calculations.

a)

	7	.	5	2
+	1	.	2	9
		.		

b)

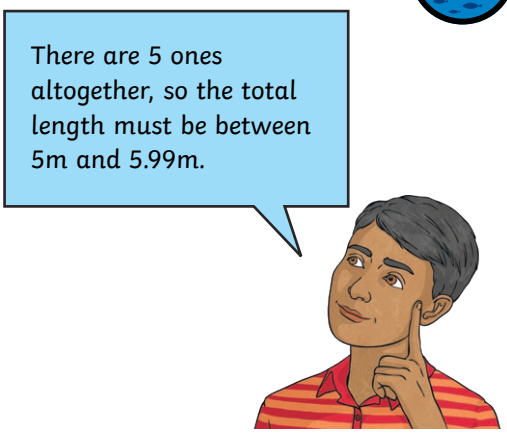
	6	5	.	8	3
+	3	1	.	4	5
			.		

3) Tanya climbed 2.68m and then 3.25m more. How high did she climb in total?

m

1) Ravi has used place value counters to calculate the total length of two rooms in his school.

Ones	tenths	hundredths
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$

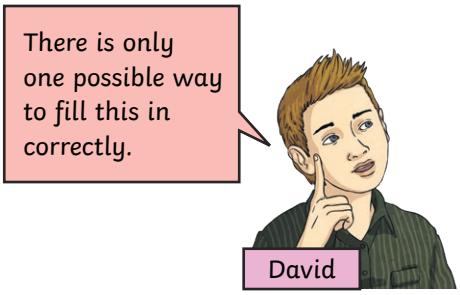


Do you agree with Ravi or not? Explain your reasons.

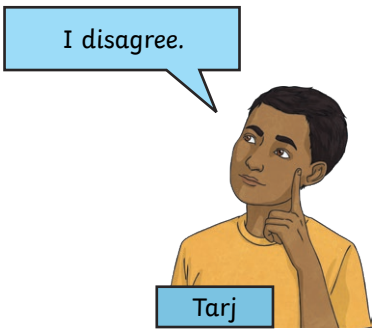
2) Frances has been practising column addition using decimals. She has made some mistakes. Can you explain each error and correct her calculations?

		4	2	.	6	5					2	.	6	3		
	+	3	.	3	2					+	3	.	6	4		
		7	.	3	8	5					5	1	2	7		

1) Tarj has written part of an addition calculation.



	2	.	4	★
+	4	.	★	2
	★	.	0	9



Who is correct, David or Tarj?

_____

2) Each letter represents a different number. Can you work out what the letters represent to make the addition calculation work? Can you find three different solutions?

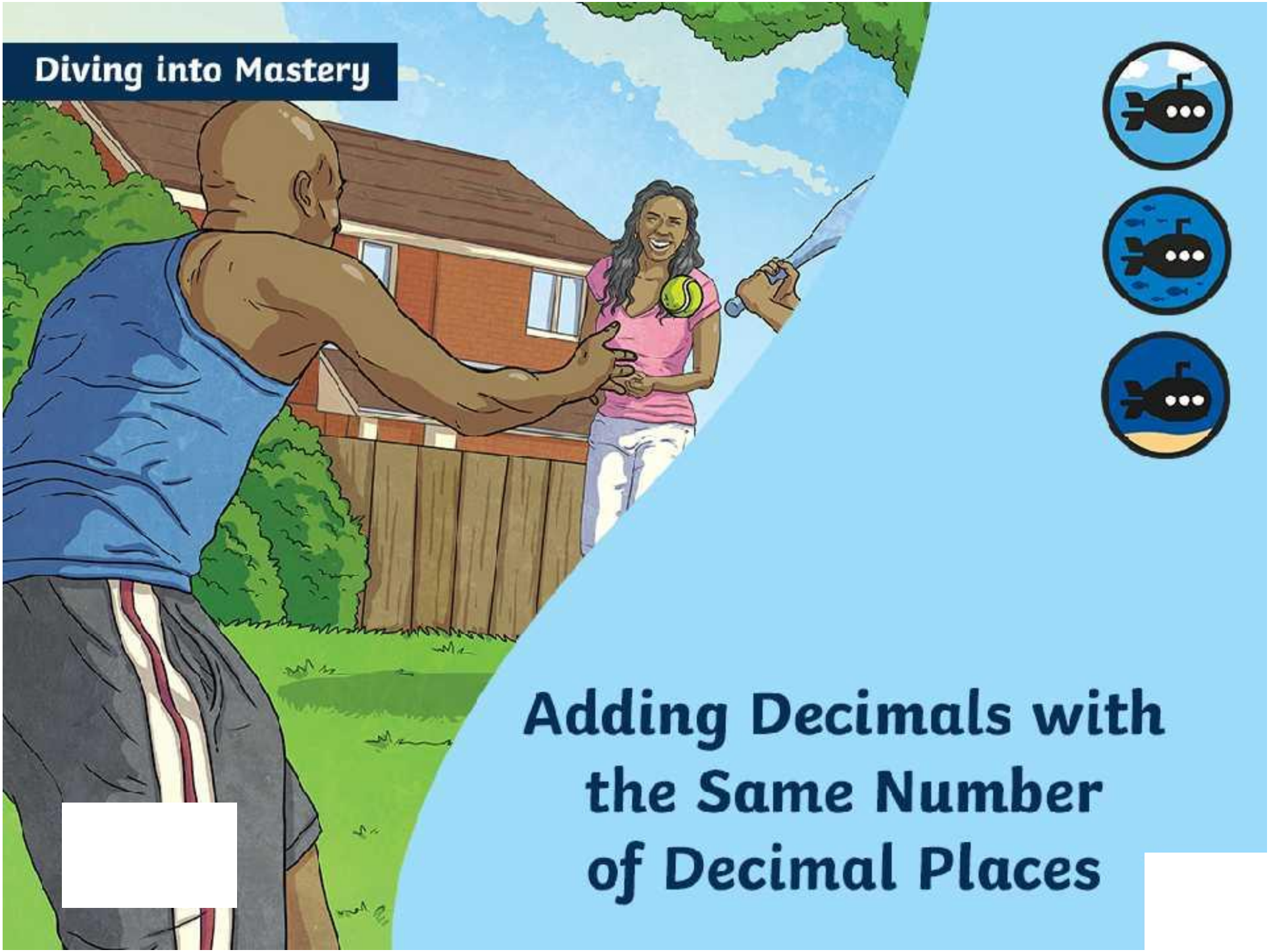
	H	.	A	T
+	K	.	S	T
	T	.	A	R

		.		
+		.		
		.		

		.		
+		.		
		.		

		.		
+		.		
		.		

Diving into Mastery



Adding Decimals with the Same Number of Decimal Places

Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

Diving

Deeper

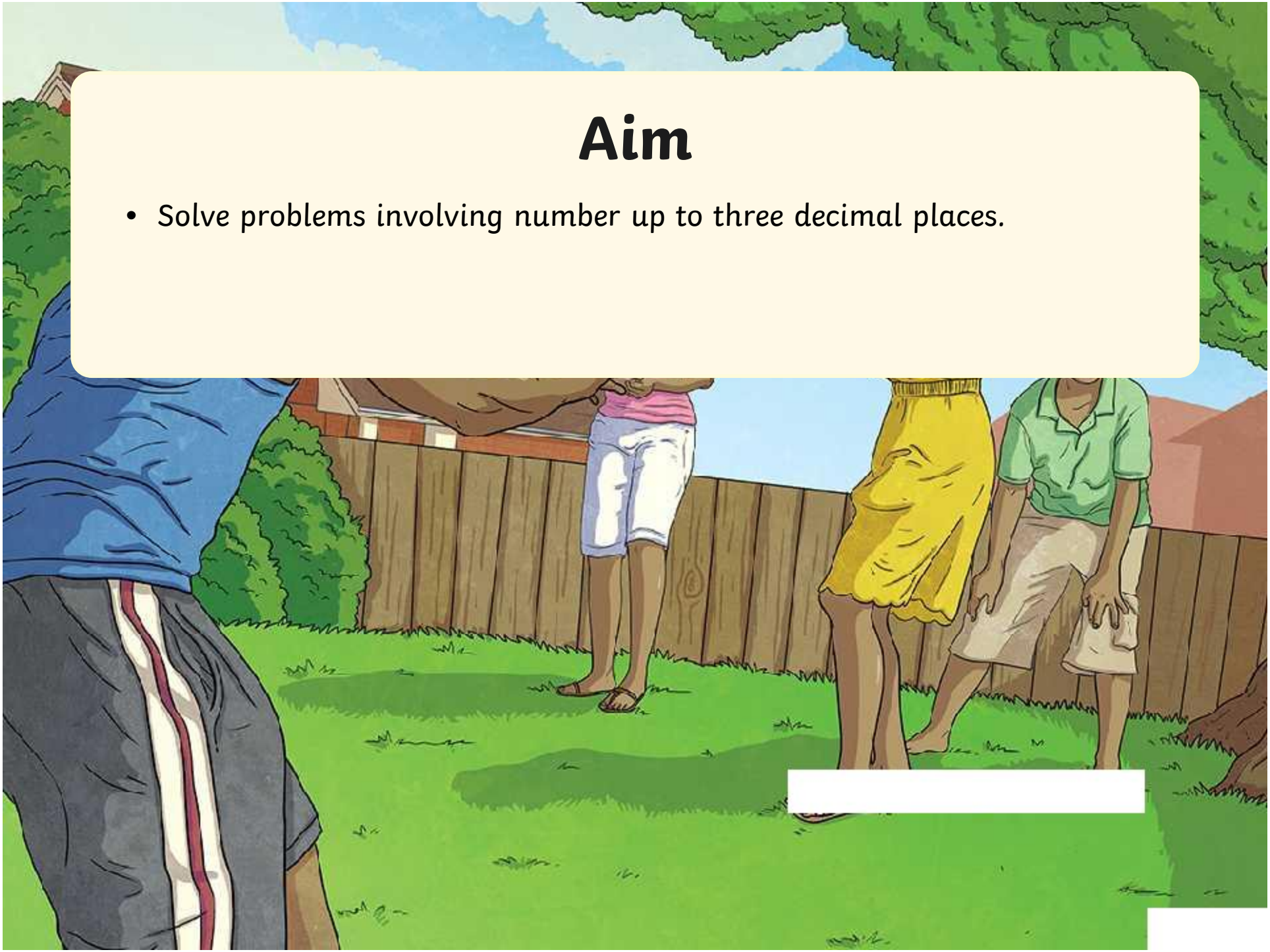
Deepest

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

Aim

- Solve problems involving number up to three decimal places.



Adding Decimals with the Same Number of Decimal Places | Diving

Use the place value chart to help you complete the calculation.

	3	.	4	2
+	3	.	3	6
	6	.	**7**	**8**

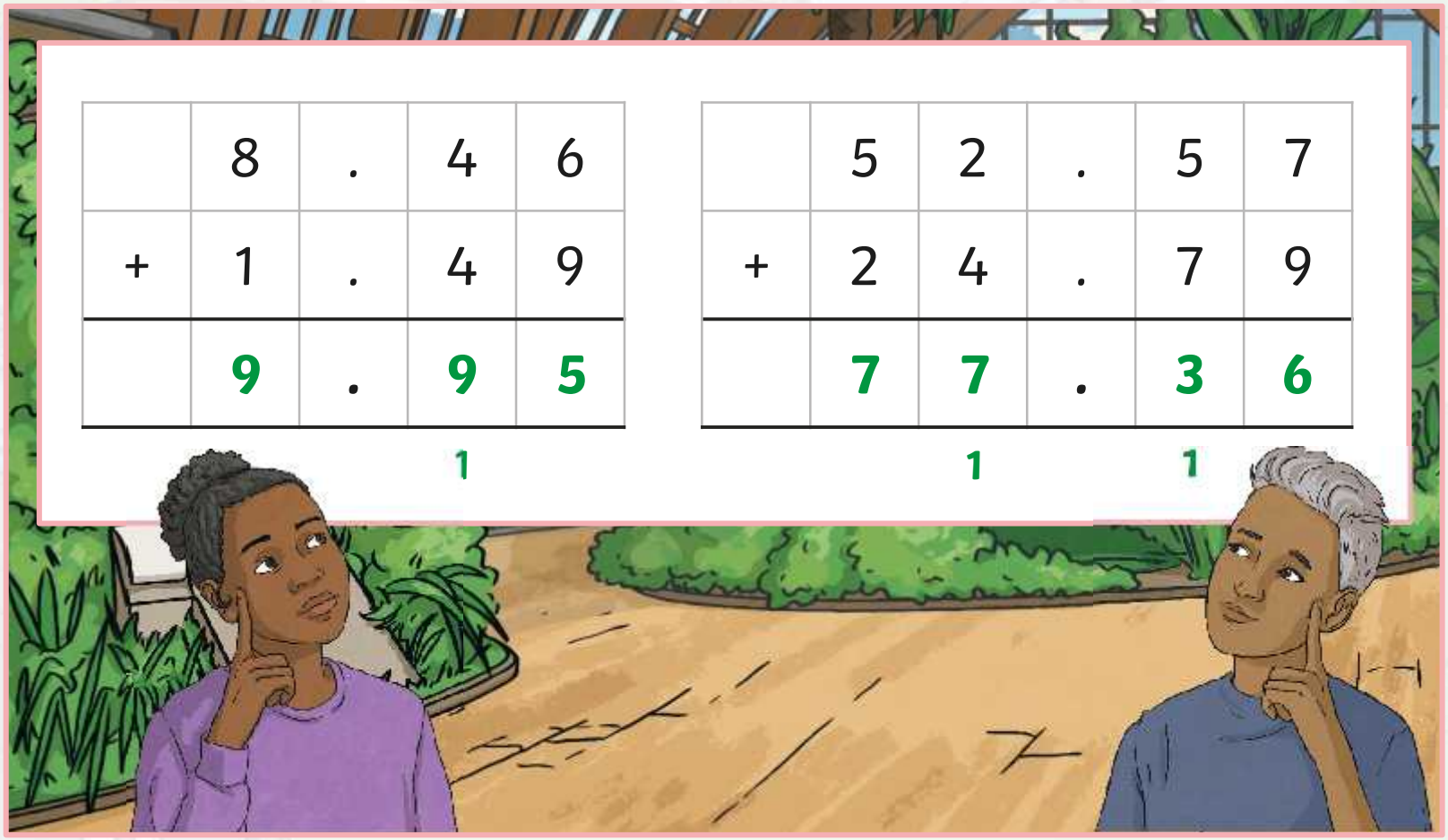
Ones	tenths	hundredths
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$

Adding Decimals with the Same Number of Decimal Places | Diving

Use the column method to solve these calculations.

	8	.	4	6
+	1	.	4	9
	9	**.**	**9**	**5**
			1	

	5	2	.	5	7
+	2	4	.	7	9
	7	**7**	**.**	**3**	**6**
		1		**1**	

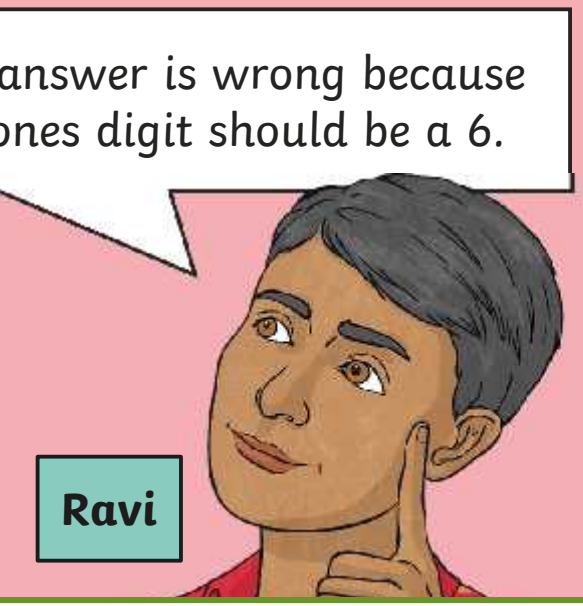


Adding Decimals with the Same Number of Decimal Places | Deeper

Do you agree with Ravi? Explain your reasoning.

	4	.	5	2
+	2	.	8	3
	7	**.**	**3**	**5**

1



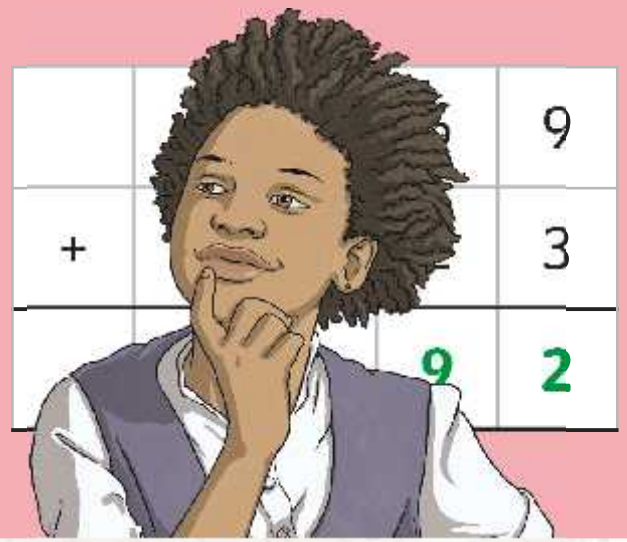
Ravi is incorrect – the answer shown is correct. The digits in the tenths column add to make 13 tenths, so 10 tenths are exchanged for 1 one, making the ones column total 7.

However, they forgot to write the small 1 to show that the tenths have been exchanged for a one.

Adding Decimals with the Same Number of Decimal Places | Deeper

Frances has been practising column addition using decimals. Can you explain and correct her error?

	4	.	6	9
+	3	.	2	3
	8	**.**	**8**	**2**
	1			



Frances has added 9 hundredths and 3 hundredths to make 12 hundredths. However, she has written the 1 in the wrong column, which means that she has incorrectly exchanged 10 hundredths for 1 one instead of 1 tenth.

Adding Decimals with the Same Number of Decimal Places | Deepest

Find two different ways to complete this calculation:

	5	.	4	7
+	2	.	🎾	2
	8	.	🎾	9

There are four possible answers:

	5	.	4	7
+	2	.	**6**	2
	8	.	**0**	9

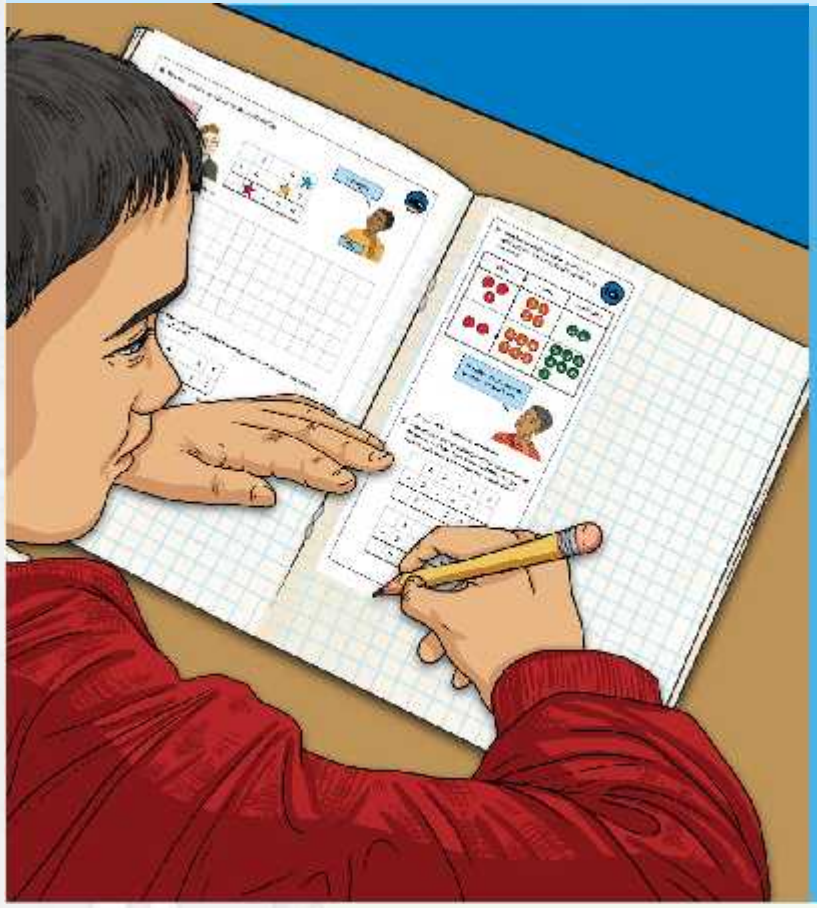
	5	.	4	7
+	2	.	**7**	2
	8	.	**1**	9

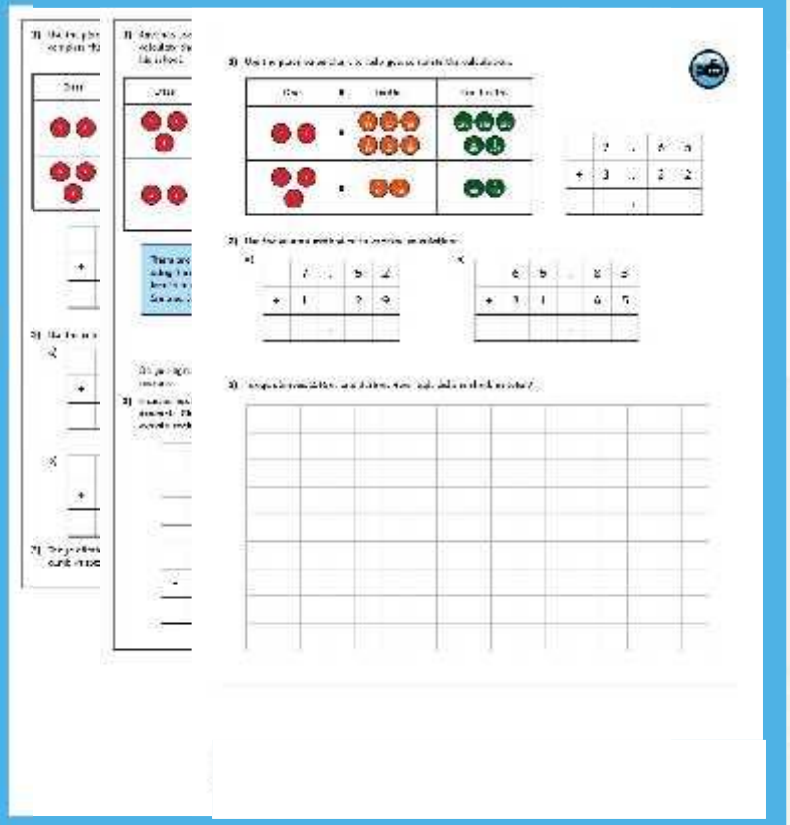
	5	.	4	7
+	2	.	**8**	2
	8	.	**2**	9

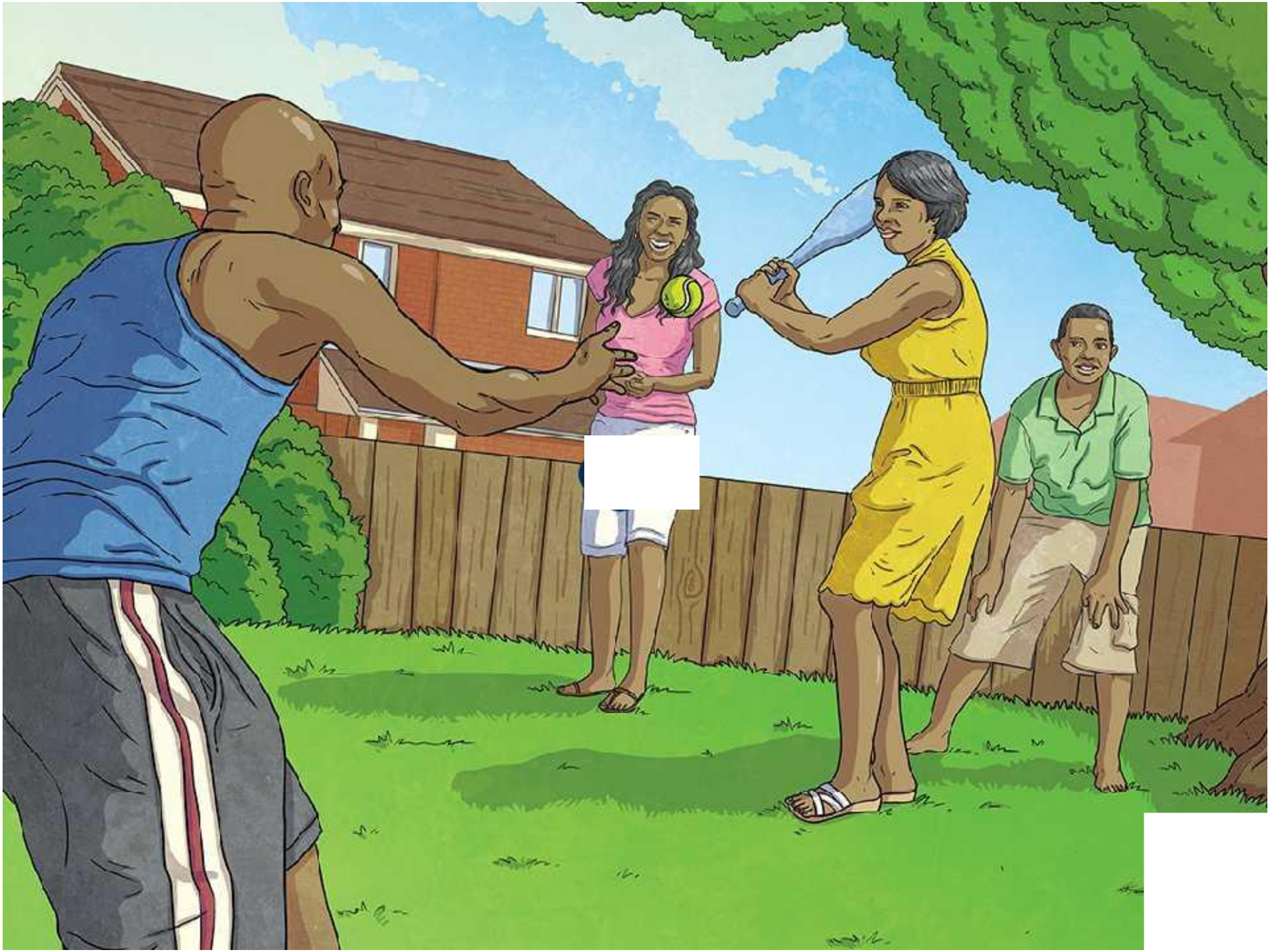
	5	.	4	7
+	2	.	**9**	2
	8	.	**3**	9

Adding Decimals with the Same Number of Decimal Places

Dive in by completing your own activity!







1) Use the place value chart to help you complete the calculation.

Ones	tenths	hundredths
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$

	2	.	6	5
+	3	.	2	2
		.		

2) Use the column method to solve these calculations.

a)

	7	.	5	2
+	1	.	2	9
		.		

b)

	6	5	.	8	3
+	3	1	.	4	5
			.		

3) Tanya climbed 2.68m and then 3.25m more. How high did she climb in total?

1) Use the place value chart to help you complete the calculation.

Ones	tenths	hundredths
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$

	2	.	6	5
+	3	.	2	2
		.		

2) Use the column method to solve these calculations.

a)

	7	.	5	2
+	1	.	2	9
		.		

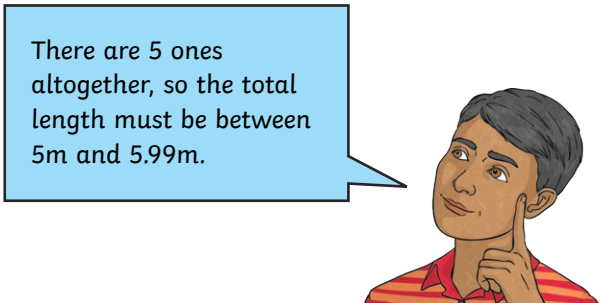
b)

	6	5	.	8	3
+	3	1	.	4	5
			.		

3) Tanya climbed 2.68m and then 3.25m more. How high did she climb in total?

1) Ravi has used place value counters to calculate the total length of two rooms in his school.

Ones	tenths	hundredths
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$



Do you agree with Ravi or not? Explain your reasons.

2) Frances has been practising column addition using decimals. She has made some mistakes. Can you explain each error and correct her calculations?

	4	2	.	6	5
+	3	.	3	2	
	7	.	3	8	5

	2	.	6	3
+	3	.	6	4
	5	1	2	7

1) Ravi has used place value counters to calculate the total length of two rooms in his school.

Ones	tenths	hundredths
1 1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$
1 1	$\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$ $\frac{1}{10}$	$\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$ $\frac{1}{100}$

There are 5 ones altogether, so the total length must be between 5m and 5.99m.

Do you agree with Ravi or not? Explain your reasons.

2) Frances has been practising column addition using decimals. She has made some mistakes. Can you explain each error and correct her calculations?

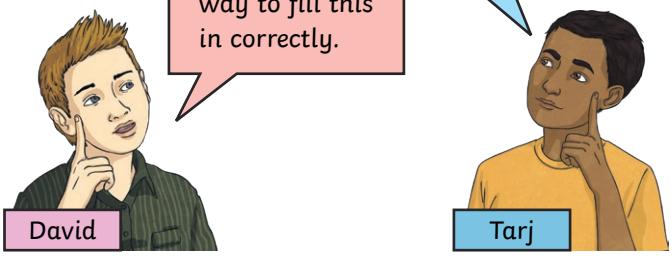
	4	2	.	6	5
+	3	.	3	2	
	7	.	3	8	5

	2	.	6	3
+	3	.	6	4
	5	1	2	7

1) Tarj has written part of an addition calculation.

Who is correct, David or Tarj?

	2	.	4	★
+	4	.	★	2
	★	.	0	9



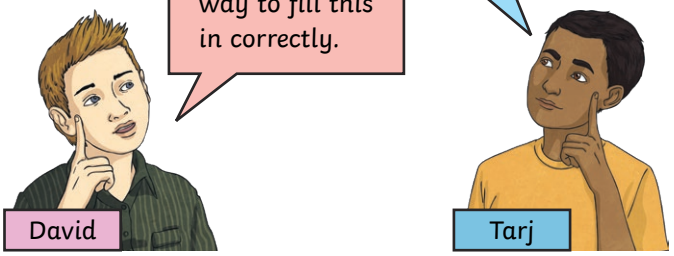
2) Each letter represents a different number. Can you work out what the letters represent to make the addition calculation work? Can you find three different solutions?

	H	.	A	T
+	K	.	S	T
	T	.	A	R

1) Tarj has written part of an addition calculation.

Who is correct, David or Tarj?

	2	.	4	★
+	4	.	★	2
	★	.	0	9



2) Each letter represents a different number. Can you work out what the letters represent to make the addition calculation work? Can you find three different solutions?

	H	.	A	T
+	K	.	S	T
	T	.	A	R