1) a) 1.815 b) 1.936 c) 1.52 d) 3.23

2) a) 2.568 b) 2.492

3) a) 1.34m b) 1.591km c) 0.485l

1) £6.32
It is really important to always check the numbers you are working with before jumping in to a method. If the numbers can be calculated mentally/with jottings, this should be used. In this case, a mental method of counting on would be much more reliable than a formal columnar subtraction method. Sandra and Harry should count on up to the next whole pound and then up to £10.
32p makes £4, then an additional £6 makes £10.

2) A and B are incorrect.
A – The decimal points are not lined up correctly so the digits are not in the correct columns according to their value.
4.382 - 1.63 = 2.752

B – A placeholder (0) needed to be added in the thousandths column so an exchange could happen.
3.64 - 1.372 = 2.268

C is correct.

3)

	4	**3**	8	
–	1	4	6	**3**
	2	9	**1**	7

	3	5	2	1
–	1	**4**	**6**	
	2	0	6	**1**

1) a) Possible solutions include:
6.456 – 1.92 = 4.536
8.412 – 3.87 = 4.542
5.321 – 0.98 = 4.341
4.987 – 0.32 = 4.667

b) Possible solutions include:
5.723 – 1.46 = 4.263
5.672 – 1.34 = 4.332
6.754 – 2.13 = 4.624
7.641 – 3.25 = 4.391

2) Possible solutions:

A = 6.354
B = 4.614
C = 2.13
D = 2.484

A = 5.478
B = 3.738
C = 1.23
D = 2.508

A = 4.985
B = 3.245
C = 1.24
D = 2.005

1) Answer these calculations.

a)

	O	t	h	th
	3	6	2	5
−	1	8	1	

b)

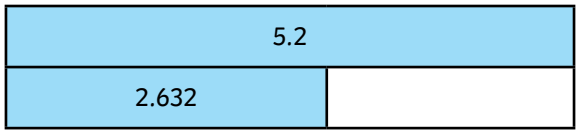
	O	t	h	th
	4	5	6	
−	2	6	2	4

c) 2.9 − 1.38 =

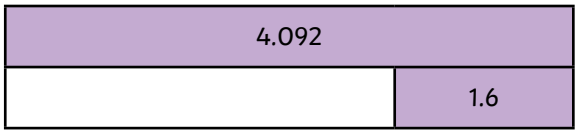
d) 5.03 − 1.8 =

2) Complete the bar models.

a)



b)



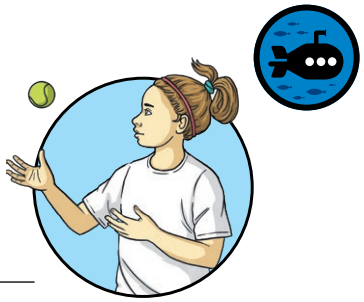
3) Answer these word problems.

a) Peter has a length of wood measuring 2.8m to make a shelf. The shelf needs to be 1.46m in length. How much needs to be cut from Peter's wood?

b) Harry is trying to run 5.05km a week. So far he has run a distance of 3.459km. How much further does he need to run to reach her goal?

c) Phillipe has a 1.5l bottle of juice. He pours 0.45l out for his brother and 0.565l for his sister. How much juice is left in the bottle?

1) Sandra and Harry are shopping.
They have £10.
They spend £3.68 on a ball.



How much change will they have? Explain what would be the most efficient strategy to calculate this.

2) Spot the mistakes.
Which of these calculations are incorrect?
Explain the mistake then work out the correct answer.

a)

	4	3	8	2
−		1	6	3
	4	**2**	**1**	**9**

b)

	3	6	4	
−	1	3	7	2
	2	**2**	**7**	**2**

c)

	5	6		
−	2	3	8	
	3	**2**	**2**	

3) Find the missing digits.

	4		8	
−	1	4	6	
		9		7

		5	2	1
−	1			
	2	0	6	

1) a) Here is a subtraction calculation with all the numbers hidden.
The answer is between 4 and 5.
What could the calculation be?
Find 4 possible calculations.

	?	?	?	?
−	?	?	?	

−				

−				

−				

−				

b) This time, you can only use the digit 1-7 once in the question.
The answer is between 4 and 5. Find as many possible solutions as you can.

	?	?	?	?
−	?	?	?	

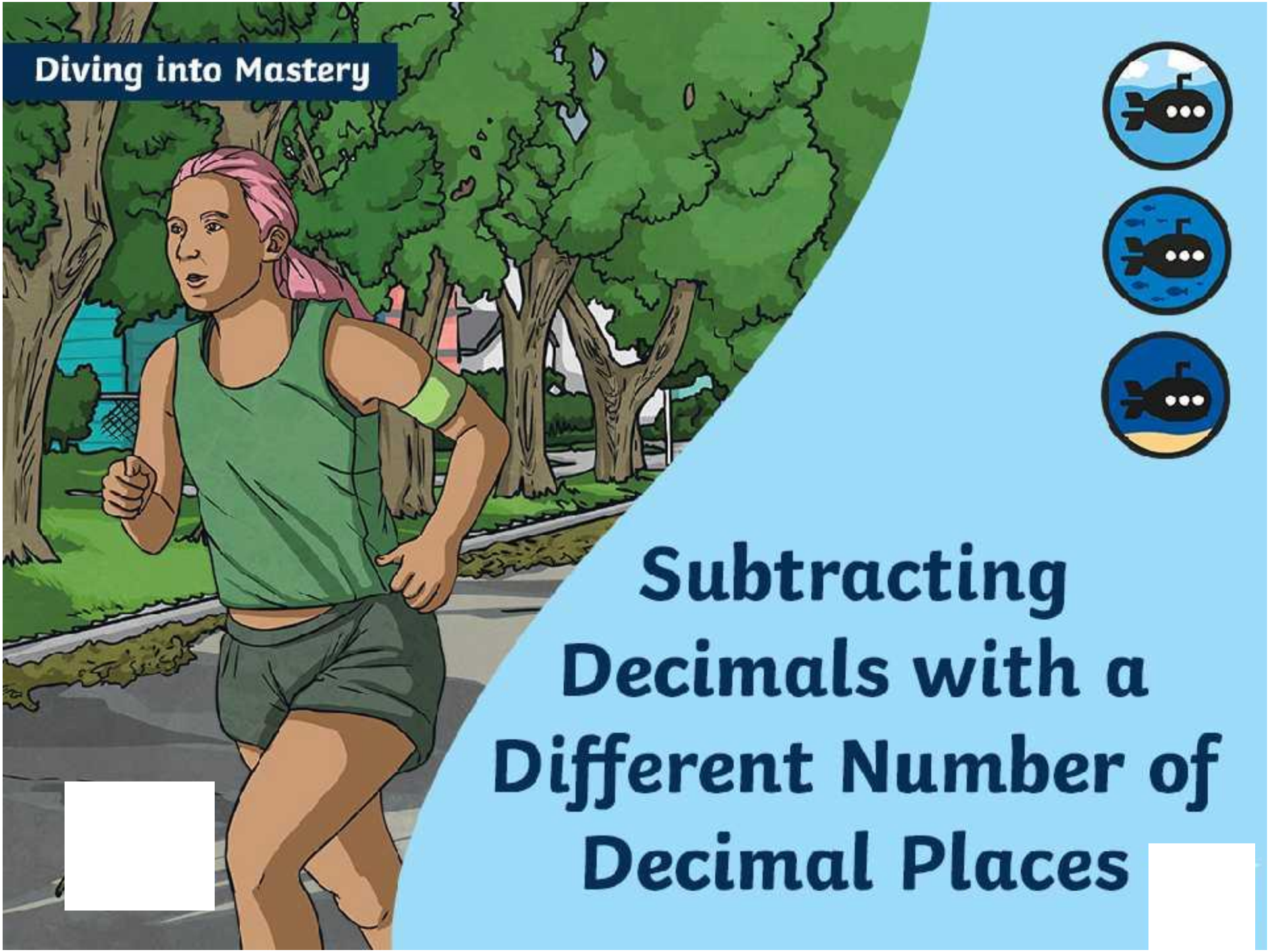
2)

A − 1.74 = B

B − C = D

A and B are 4-digit numbers with three decimal places.
C is a 3-digit number with two decimal places.
D is a decimal number between 2 and 3.

What could the values of A, B, C and D be?
Find as many different sets of numbers as you can.



Subtracting Decimals with a Different 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.

Subtracting Decimals with a Different Number of Decimal Places

Diving

Complete these calculations:

a)

	O	t	h	th
	~~4~~ 3	~~3~~ 12	6 1	2
−	1	7	8	0
	2	5	8	2

b)

	O	t	h	th
	~~5~~ 4	3 1	~~6~~ 5	0 1
−	2	4	1	5
	2	9	4	5

c) 4.7 − 2.34 = **2.36**

d) 3.678 − 1.9 = **1.778**

Subtracting Decimals with a Different Number of Decimal Places

Diving

Complete these calculations:

a)

	O	t	h	th
	~~4~~ 3	~~3~~ 12	6 1	2
−	1	7	8	0
	2	5	8	2

b)

	O	t	h	th
	~~5~~ 4	3 1	~~6~~ 5	0 1
−	2	4	1	5
	2	9	4	5

c) 4.7 − 2.34 = **2.36**

d) 3.678 − 1.9 = **1.778**

Subtracting Decimals with a Different Number of Decimal Places

Diving

Answer these word problems:

Peter has a length of wood measuring 3.6m to make a shelf. The shelf needs to be 1.57m in length. How much wood will be left over?

3.6m – 1.57m
= **2.03m**

Jenny is trying to run 3.25km a week. So far she has run a distance of 1.785km. How much further does she need to run to reach her goal?

3.25km – 1.785km
= **1.465km**

Phillipe has a 2.5l bottle of juice. He pours 0.79l out for his brother and 1.038l for his sister. How much juice is left?

2.5l – 0.79l = **1.71l**

1.71l – 1.038l = **0.672l**

Subtracting Decimals with a Different Number of Decimal Places

Deeper

Sandra and Harry are shopping. They have £8. They spend £4.54 on a yo-yo.

How much change will they have?

What would be the most efficient strategy to calculate this. Explain your thinking.

£3.46 change

It is really important to always check the numbers you are working with before jumping in to a method. If the numbers can be calculated mentally/with jottings, this should be used. In this case, a mental method of counting on would be much more reliable than a formal columnar subtraction method. Sandra and Harry should count on up to the next whole pound and then up to £8.

46p makes £5, then an additional £3 makes £8.

Subtracting Decimals with a Different Number of Decimal Places

Deeper

Spot the mistake.

Explain the mistake and then work out the correct answer.

	$^{3}\cancel{4}$	$^{1}3$	6	
−	1	9	3	4
	2	**4**	**3**	**4**

	$^{3}\cancel{4}$	$^{1}3$	$^{5}\cancel{6}$	$^{1}0$
−	1	9	3	4
	2	**4**	**2**	**6**

Subtracting Decimals with a Different Number of Decimal Places

Deeper

Find the missing digits in these calculations.

	4 ~~5~~ .	1 3	6 ~~7~~	1 0
−	2 .	6	3	2
	2 .	7	3	8

	3 ~~4~~ .	12 ~~3~~	1 7	6
−	1 .	4	8	0
	2 .	8	9	6

Subtracting Decimals with a Different Number of Decimal Places

Deepest

Here is a subtraction calculation with all the numbers hidden. The answer is between 3 and 4. What could the calculation be? Find 4 possible calculations.

	?	?	?	?
–	?	?	?	

Many calculations are possible. For example:

4.958 – 1.25 = 3.708
6.547 – 3.36 = 3.187
3.698 – 0.54 = 3.158
7.358 – 3.87 = 3.488

This time, you can only use the digit 1-7 once in the question. The answer is between 3 and 4. Find 4 possible solutions.

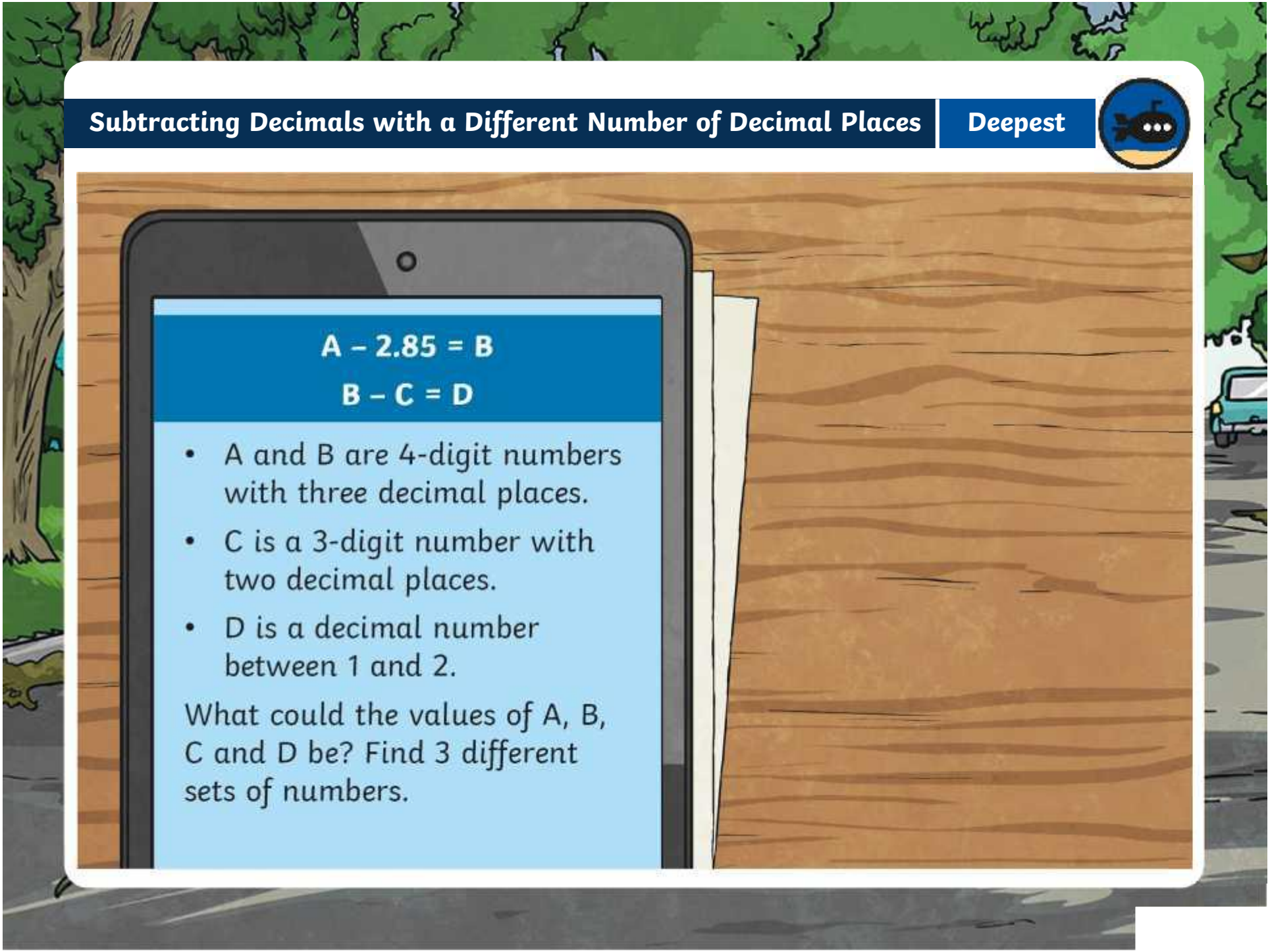
	?	?	?	?
–	?	?	?	

Many calculations are possible. For example:

4.657 – 1.23 = 3.427
6.574 – 3.21 = 3.364
5.674 – 2.31 = 3.364
7.514 – 3.62 = 3.894

Subtracting Decimals with a Different Number of Decimal Places

Deepest



$$A - 2.85 = B$$

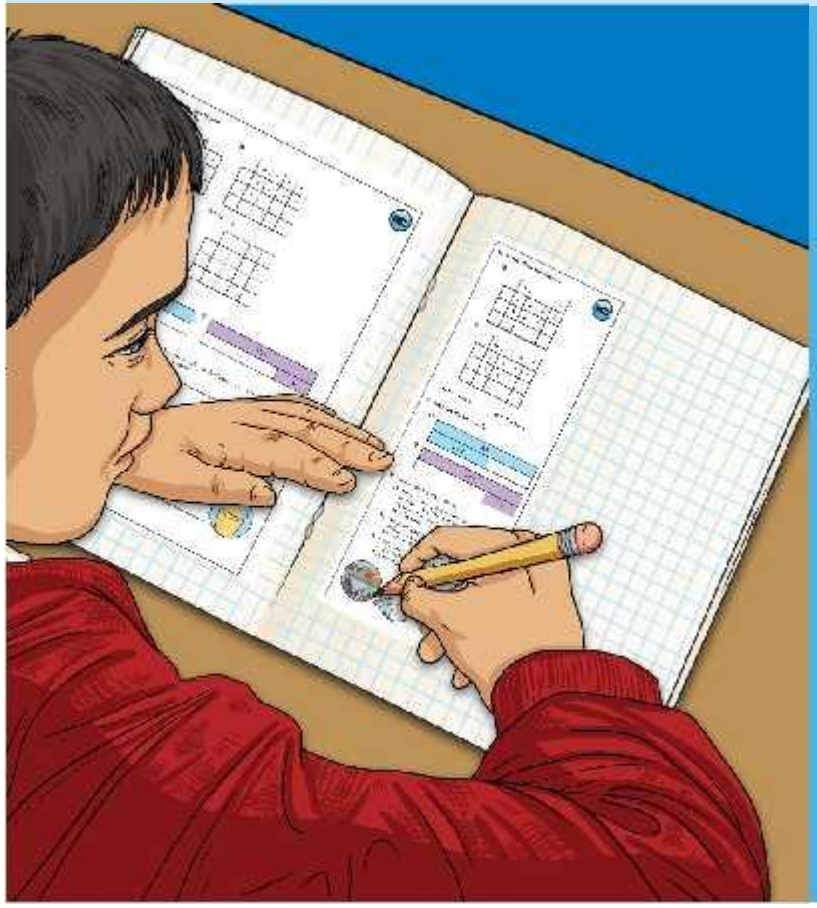
$$B - C = D$$

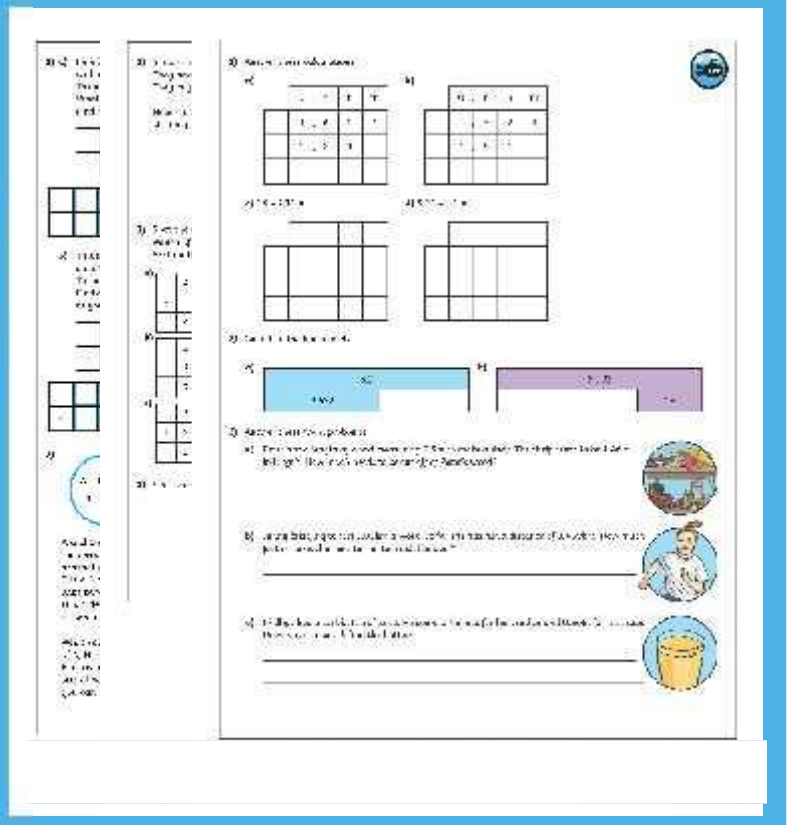
- A and B are 4-digit numbers with three decimal places.
- C is a 3-digit number with two decimal places.
- D is a decimal number between 1 and 2.

What could the values of A, B, C and D be? Find 3 different sets of numbers.

Subtracting Decimals with a Different Number of Decimal Places

Dive in by completing your own activity!





1) Answer these calculations.

a)

	O	.	t	h	th
	3	.	6	2	5
−	1	.	8	1	
		.			

b)

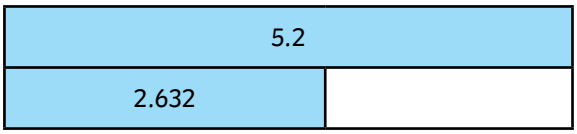
	O	.	t	h	th
	4	.	5	6	
−	2	.	6	2	4
		.			

c) 2.9 − 1.38 =

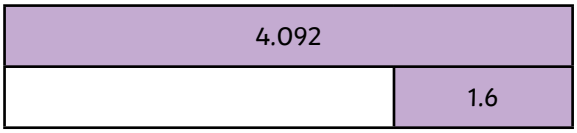
d) 5.03 − 1.8 =

2) Complete the bar models.

a)



b)



3) Answer these word problems.

a) Peter has a length of wood measuring 2.8m to make a shelf. The shelf needs to be 1.46m in length. How much needs to be cut from Peter's wood?

b) Harry is trying to run 5.05km a week. So far he has run a distance of 3.459km. How much further does he need to run to reach her goal?

c) Phillipe has a 1.5l bottle of juice. He pours 0.45l out for his brother and 0.565l for his sister. How much juice is left in the bottle?

1) Answer these calculations.

a)

	O	.	t	h	th
	3	.	6	2	5
−	1	.	8	1	
		.			

b)

	O	.	t	h	th
	4	.	5	6	
−	2	.	6	2	4
		.			

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2) Complete the bar models.

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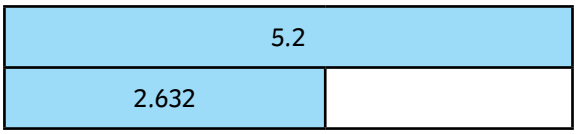
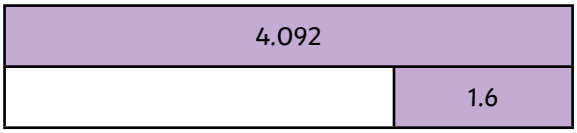


b)



3) Answer these word problems.

a) Peter has a length of wood measuring 2.8m to make a shelf. The shelf needs to be 1.46m in length. How much needs to be cut from Peter's wood?

b) Harry is trying to run 5.05km a week. So far he has run a distance of 3.459km. How much further does he need to run to reach her goal?

c) Phillipe has a 1.5l bottle of juice. He pours 0.45l out for his brother and 0.565l for his sister. How much juice is left in the bottle?

1) Sandra and Harry are shopping. They have £10. They spend £3.68 on a ball.

How much change will they have? Explain what would be the most efficient strategy to calculate this.

2) Spot the mistakes.
Which of these calculations are incorrect? Explain the mistake then work out the correct answer.

a)

	4	3	8	2
−		1	6	3
	4	**2**	**1**	**9**

b)

	3	6	4	
−	1	3	7	2
	2	**2**	**7**	**2**

c)

	5	6		
−	2	3	8	
	3	**2**	**2**	

3) Find the missing digits.

	4		8	
−	1	4	6	
		9		7

		5	2	1
−	1			
	2	0	6	

1) Sandra and Harry are shopping. They have £10. They spend £3.68 on a ball.

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b)

	3	6	4	
−	1	3	7	2
	2	**2**	**7**	**2**

c)

	5	6		
−	2	3	8	
	3	**2**	**2**	

3) Find the missing digits.

	4		8	
−	1	4	6	
		9		7

		5	2	1
−	1			
	2	0	6	

1) a) Here is a subtraction calculation with all the numbers hidden.
The answer is between 4 and 5.
What could the calculation be?
Find 4 possible calculations.

	?	?	?	?
–	?	?	?	

b) This time, you can only use the digit 1-7 once in the question.
The answer is between 4 and 5.
Find as many possible solutions as you can.

	?	?	?	?
–	?	?	?	

2) A and B are 4-digit numbers with three decimal places.

C is a 3-digit number with two decimal places.

A – 1.74 = B

B – C = D

D is a decimal number between 2 and 3.

What could the values of A, B, C and D be?
Find as many different sets of numbers as you can.

1) a) Here is a subtraction calculation with all the numbers hidden.
The answer is between 4 and 5.
What could the calculation be?
Find 4 possible calculations.

	?	?	?	?
–	?	?	?	

b) This time, you can only use the digit 1-7 once in the question.
The answer is between 4 and 5.
Find as many possible solutions as you can.

	?	?	?	?
–	?	?	?	

2) A and B are 4-digit numbers with three decimal places.

C is a 3-digit number with two decimal places.

A – 1.74 = B

B – C = D

D is a decimal number between 2 and 3.

What could the values of A, B, C and D be?
Find as many different sets of numbers as you can.