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# Maths

Entry Level 3, Book 1

**GLH 3**

**Place Value and Sequencing**

Name	
Number	
Location	
Date Issued	





## ➤ Introduction

This booklet is part of your learning programme.

Remember to read carefully and try your best. Don't worry if you get stuck, make a note on the booklet and move on to the next task. Try coming back to it later, see if you can work it out then.

If you are still stuck, remember to make a note at the end of the booklet.

Throughout the booklet, you will see that some words have been printed **blue and bold**. You will find more detailed explanations of each of these words in the 'Glossary' at the back of the booklet.



**Glossary** is a list of often difficult or specialised words with their definitions, placed at the back of a book. You may also know this as a word bank.

By working through this booklet, you will understand what place value is and how it helps in all aspects of maths. Place value helps us make decisions that are used in our daily lives about such things as costs, weight, distances, time etc.

## What Do the Symbols in this Booklet Mean?



Where you see this symbol, there is a skills practice or activity for you to complete.



Information, explanations and case studies are shown with this icon.



This shows you there is a glossary or word bank with the meaning and correct spelling of key words.



This icon shows where to write comments for your tutor to read.



This symbol lets you know there are some key points to remember.



## The Big Picture



You are studying Entry Level 3 Maths, which is taught over 55 Guided Learning Hours (GLH).

The programme covers the units listed below. The unit that you're working on today is ticked.

Booklet		GLH	
1	<b>Place Value and Sequencing</b>	3	✓
2	Addition and Subtraction		
3	Multiplication		
4	Division		
5	Fractions		
6	Decimals and Money		
7	Rounding		
8	Time		
9	Shape and Space		
10	Measure		
11	Handling Data		
12	Recap and Summary		

## Outcomes

These are the outcomes you can achieve by completing the learning activities in this booklet.

1

Read and write numbers in written and digit form up to 1000.

2

Compare numbers up to 1000.

3

Recognise and continue numbers in a pattern (sequence) that increases or decreases. This can also be known as a **linear sequence**.



## Recap



A **recap** is an effective way of helping you to remember and apply what you have learnt. If this is your first booklet, it may help you to think about what you know already about this subject. Can you answer the following questions?



What was the last booklet you completed?



Can you remember what you learnt about?



Can you remember three key points from the booklet?

1

2

3

## Recap – What is Place Value?



Modern maths uses the decimal system, which only has 10 individual **digits from 0 to 9**.

This may sound a little confusing, but it will start to make sense in a short while.

- **Place value** is the value of each digit (number) in a number.
- 10 is made up of 1 ten and 0 ones.
- 456 is made up of 4 hundreds, 5 tens and 6 ones.

We can write numbers beyond the millions, billions and trillions but these are obviously very large numbers and not used in day-to-day life.

0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

Place value means the value of the digit changes depending on where it appears in a number.

**Example:** the number 222 is written as:

Hundreds	Tens	Ones	
H	T	O	
		2	This means <b>2 ones</b>
	2		This means <b>2 tens</b>
2			This means <b>2 hundreds</b>



## Recap – What is Place Value?

Every number over 9 can be **partitioned** (split) to show each individual digit's **place value**.

Thousands	Hundreds	Tens	Ones
	4	5	2
	4	0	6
	9	0	0
	7	6	2

How would 452 be split into hundreds, tens and ones?

- 4 in the hundreds column (4 lots of 100)
- 5 in the tens column (5 lots of 10)
- and 2 in the ones column (2 lots of 1)

So, the number is **four hundred and fifty-two (452)**.

How would 406 be split?

- 4 in the hundreds column (4 lots of 100)
- 0 in the tens column (0 lots of ten)
- and 6 in the ones column (6 lots of 1)

So, the number is **four hundred and six (406)** – the zero (0) acts as a place holder, otherwise the number would read as 46.

The number 900 is made up of:

- 9 in the hundreds column (9 lots of 100)
- 0 in the tens column (0 lots of ten)
- and 0 in the ones column (0 lots of 1)

So, the number is **nine hundred (900)** – the zeros act as place holders, otherwise the number would read as 9.

The number 762 is made up of:

- 7 in the hundreds column (7 lots of 100)
- 6 in the tens column (6 lots of ten)
- and 2 in the ones column (2 lots of 1)

So, the number is **seven hundred and sixty-two (762)**.

## Place Value



Task  
1

Split the numbers below into thousands, hundreds, tens and ones and complete the table.

Refer back to the table on the previous page if you need to. The first two have been completed for you.

**Example:**

254 is 2 hundreds, 5 tens and 4 ones.

Number	Thousands	Hundreds	Tens	Ones
254		2	5	4
15			1	5
78				
104				
589				
962				
1000				
708				

## Place Value



When reading numbers, we start at the left-hand side and read across. The number in the grid below is 999 (nine hundreds, nine tens and nine ones).

Even though these digits are the same, their position or place changes their value.

We set out numbers in place value up to 'thousands'.



Task  
2

Put the following in the correct places in the table below:

- Seventy-nine
- One hundred and eight
- Three hundred and twenty-six
- One thousand
- Seven hundred and nine
- Five hundred and sixty-two

Thousands	Hundreds	Tens	Ones
	9	9	9

## Numbers in Words

Use this spelling sheet to help you complete the task on the next page.

These are the basic numbers we use up to one thousand and we make up all others from these. If you learn how to spell these, then it will be easy to write numbers in words. The numbers in bold can be tricky. Have a look at some of the trickier examples below.

one	<b>eleven</b>	<b>thirty</b>
two	<b>twelve</b>	<b>forty</b>
three	<b>thirteen</b>	<b>fifty</b>
four	fourteen	sixty
five	<b>fifteen</b>	seventy
six	sixteen	eighty
seven	seventeen	ninety
eight	eighteen	hundred
nine	nineteen	thousand
ten	<b>twenty</b>	

### Example:

- **21 is twenty-one** – made from twenty and one
- **88 is eighty-eight** – made from eighty and eight
- **576 is five hundred and seventy-six** – made from five hundreds, seventy and six



## Numbers in Words



### Task 3

Write the number in words. Numbers 21 to 99 should be hyphenated.

Numbers	Words
75	Seventy-five
43	
108	
341	
598	
997	
1000	



### Task 4

Use the grid on page 13 to help write these numbers in digit form.

Numbers	Words
29	Twenty-nine
	Sixty-four
	One hundred and eight
	Three hundred and fourteen
	Two hundred and sixty-nine
	Seven hundred and twenty-three
	One thousand

## Ordering Numbers

When we have groups of numbers, it is quite often difficult to compare them until they are in order.

To order them, we need to look at the first number (on the left-hand side) to start with and move across to the right.

When we compare two numbers, there are three possibilities:

- The first number is larger than the second
- The second number is larger than the first
- The two numbers are equal or the same

### Example:

Which number is smaller, 738 or 931?

Line up the digits.

Thousands	Hundreds	Tens	Ones
	7	3	8
	9	3	1

↑  
Same digits

- Compare the digits starting from the left
- Find the first place that they differ
- In this example, the digits in the hundreds place are not the same
- 9 is larger than 7
- So, 931 is larger than 738

## Ordering Numbers

When ordering numbers, we can compare the digits two at a time. We can also use the following method.

### Example:

Arrange the following numbers from largest to smallest:

876, 987, 856

Hundreds	Tens	Ones
8	7	6
9	8	7
8	5	6

- Line up the numbers so that the hundreds, tens and ones are in columns (see table above).
- Start from left to right.
- In the first column, the largest number is 9; this makes the number 987 the first number in the sequence or order.
- The next largest number is 8. But this is the first digit for both 876 and 856, so we look at the largest number in the next column, which is 7. This makes 876 the next number in the sequence.
- This leaves the last number in the sequence as 856.
- So, your answer is: **987, 876, 856**



## Compare Numbers up to 1000

When comparing numbers, it is important to use place value to compare each number.

**Example:** Which number is bigger, 909 or 912?

9 0 9      9 0 9  
9 1 2      9 1 2



First (1st)	Second (3rd)	Third (3rd)	Fourth (4th)
Thousands	Hundreds	Tens	Ones
	9	0	9
	9	1	2

- Line up the numbers so that the hundreds, tens and ones are in columns (see table above)
- Start from left to right
- In the first column, the greatest digit makes the number the largest. There are no digits in the first column, so try the second.
- In the second column, both the digits in the hundreds column are 9, so both are worth 900 so we cannot tell the greater number from that.
- In the third column, the tens column has a 1 and 0. Therefore the bigger digit, 1, is worth 10, which means that this belongs to the biggest number.

## Skills Practice



Task  
7

Find the value of the bold number. The first one has been completed for you.

Number	Value in Words	Value in Numbers
<b>13</b>	<b>Ten</b>	<b>10</b>
<b>76</b>		
<b>90</b>		
<b>42</b>		
<b>68</b>		
<b>24</b>		
<b>88</b>		
<b>31</b>		
<b>573</b>		
<b>921</b>		
<b>278</b>		
<b>540</b>		



Task  
8

Circle the largest number in each row:

10	32	97
23	32	30
10	325	97
111	191	201
890	908	809



## Skills Practice



Task  
9

### Hundred Square Fill-in

Place the numbers into the correct spaces in the grid. Use only the numbers provided. You will have empty spaces at the end.

1									10
				15					
			24					29	
						37			
	42								
					56				
	62						68		
			74						80
81						87			
				95					100

Fill in **only** these numbers:

41, 94, 50, 19, 45, 77, 27, 79, 96,

6, 92, 61, 65, 33, 12, 58, 63, 99

## Skills Practice



Task  
10

1. What is the value of the second digit in the number 317?

.....

2. What does the 8 in the number 833 represent?

**a. 8   b. 80   c. 800   d. 833**

.....

3. Which of these numbers is the smallest?

**a. 308   b. 396   c. 312   d. 357**

.....

4. Put these numbers in order of size starting with the smallest.

**103   584   133   372**

.....

5. Shown here are the heights of four hills. Can you order the hills by highest to lowest?

**Bray Down – 346m** .....

**Blackstone Edge – 472m** .....

**Kinder Scout – 636m** .....

**Knowl Hill – 419m** .....



This task continues on the next page.

## Skills Practice



Task  
10

6. What is the value of the 3 in the number 367?  
.....
7. Circle the correct statement about the number 920
- a. The 2 is worth the same as the 0
  - b. The 2 is worth more than the 9
  - c. The 2 is worth less than the 9
8. Put these numbers in order, starting with the smallest.  
**515   489   507**  
.....
9. Put these numbers in order, starting with the largest.  
**166   711   921**  
.....
10. Circle the number that is 10 more than eight hundred and seventy-one.  
**874   881   971   861**
11. In your hair salon you have customers who make appointments. On Thursday you have 63 customer appointments. On Friday you have 44 appointments and on Saturday you have 43 appointments.  
Which was your busiest day?

## Skills Practice



Task  
10

**12.** You run a garden centre. You need to bulk buy seeds for growing your plants. Flower seeds come in 2 different sized packets. Packet A contains 190 seeds. Packet B contains 109 seeds. Both packets cost the same.

Which is best value, A or B?

**13.** On Monday you have 197 customers, on Thursday you have 304 customers and on Saturday you have 403 customers.

Which was your busiest day?

This task continues on the next page.

## Skills Practice



Task  
10

**14.** Last week you sold 87 lavender plants, 333 geraniums, 402 camelias and 329 rose bushes.

**a.** Which was your best seller?

**b.** Which was your worst seller?



## What is Sequencing?



**Sequencing** means arranging something in an order.

In maths, this is usually a list of numbers, the problem is we don't always know all of the numbers.



In gardening, gardeners use sequence a lot to carefully plan out intricate designs and layouts.

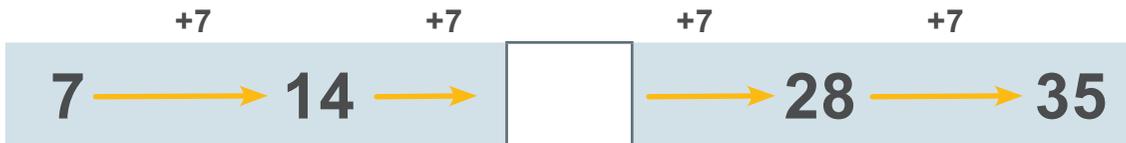
The number of plants and distance between each plant will be carefully calculated to produce beautiful gardens like the one above.

Another example of sequencing is in joinery. In the workshop the joiner needs to repair their ladder. The ladder has seven rungs from top to bottom. Rungs 1-3 have become loose and need to be replaced so the joiner will need to work out the distance or sequence between the top rung and each of the loose rungs so that they can be replaced.



## Sequencing

Because we don't always know all of the numbers it is often easier to work out what the difference or step between numbers is.



In this example, each step is a +7 jump. So, to work out the missing value, we just +7 to the previous number. **The missing number is  $14 + 7 = 21$**



Task  
11

Have a go at completing the following sequences.



## Sequencing

Not every sequence goes from low to high, some (like the example below) go from high to low. The method of calculating the missing numbers is the same. Work out what each step is.



So, the difference between 54 and 42 is 12 ( $54 - 42 = 12$ )

And the difference between 42 and 30 is 12 ( $42 - 30 = 12$ )



So, to work out the missing numbers, we do:  $30 - 12 = 18$   
 $54 + 12 = 66$  (This is  $+12$  because it is before 54 in the sequence)



Task  
12

Have a go at completing the following sequences.

<b>a.</b>	<b>55</b>		<b>33</b>		
-----------	-----------	--	-----------	--	--

<b>b.</b>	<b>110</b>		<b>70</b>		<b>30</b>	
-----------	------------	--	-----------	--	-----------	--

<b>c.</b>	<b>64</b>	<b>60</b>		<b>52</b>			
-----------	-----------	-----------	--	-----------	--	--	--

<b>d.</b>		<b>66</b>	<b>33</b>	
-----------	--	-----------	-----------	--

<b>e.</b>	<b>1000</b>		<b>500</b>		<b>0</b>
-----------	-------------	--	------------	--	----------

<b>f.</b>	<b>80</b>	<b>73</b>		<b>59</b>		
-----------	-----------	-----------	--	-----------	--	--

## Recap

You have now completed this workbook. To recap, you have:

Recapped on place values.	✓
You have used ordering of numbers to compare smallest to largest numbers.	✓
Practiced sequencing.	✓



## Feedback



**WWW (What Went Well)**

**EBI (Even Better If)**

**Next steps**

**Learner feedback** (Please provide some feedback for your tutor following the comments that you have just made on your work.)

## Glossary



<b>Digit</b>	Any of the numerals from 0 to 9, especially when forming part of a number.
<b>Linear</b>	Linear numbers are patterns or sequences of numbers where the difference between every term is the same.
<b>Sequence</b>	A particular order in which related events, movements, or things follow each other.
<b>Partitioned</b>	To split up or divide into parts.



## Next Steps

Now you have completed Booklet 1, please return this to your tutor/trainer.

Your tutor/trainer will mark the work and provide you with some feedback showing what you have done well and suggestions on improvements.

The next booklet will be provided to you.



## Have Your Say



We would be interested in your opinion of this booklet.

1. **Was there anything you found easy in this workbook?** Yes No  
If you answered yes, what did you find easy?

2. **Was there anything you found hard?** Yes No  
If you answered yes, what did you find hard?

3. **Is there anything that you would like your tutor to go over again?** Yes No  
If you answered yes, what is this?

4. **If your tutor provided learning aids, did you use them?** Yes No  
If you answered yes, how were they useful?

5. **Would you like more support?** Yes No  
If you answered yes, one of our Support Staff will get in touch with you.

6. **Do you have any questions?**

7. **What have you learnt from this booklet?**



## Notes





## Notes



## Notes



