Maths

Number and Place Value

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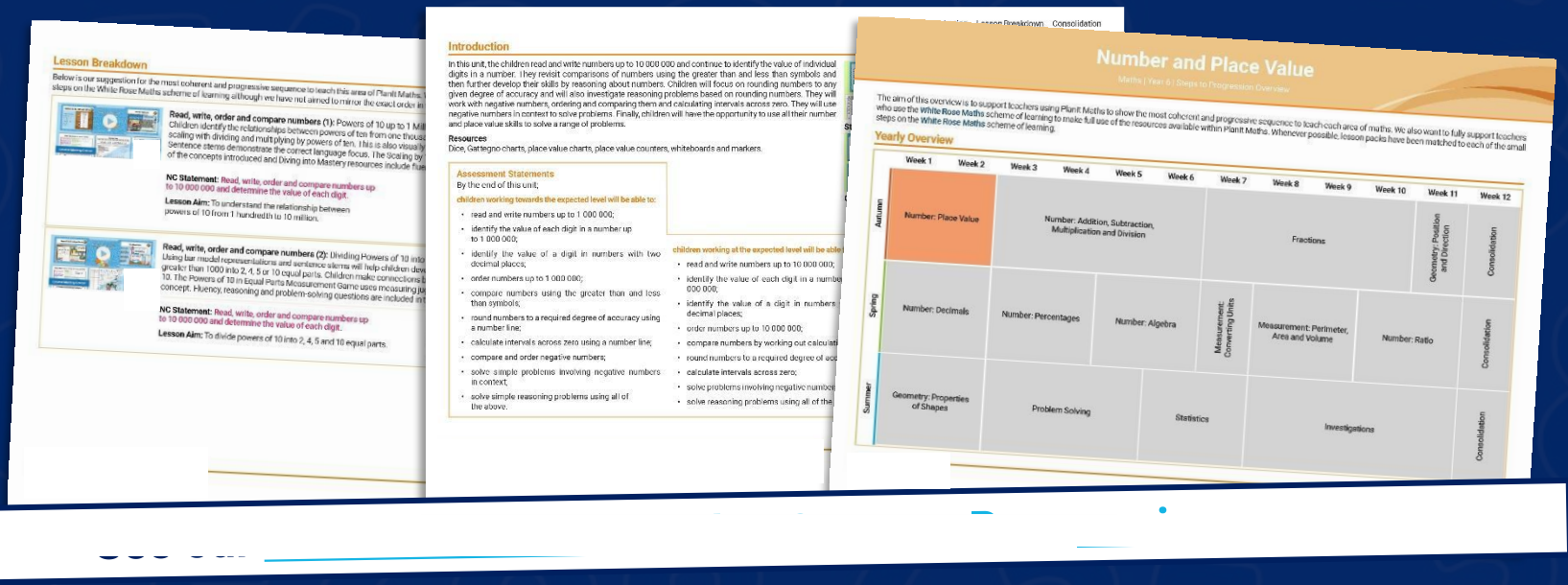
Need a coherently planned sequence of lessons to complement this resource?



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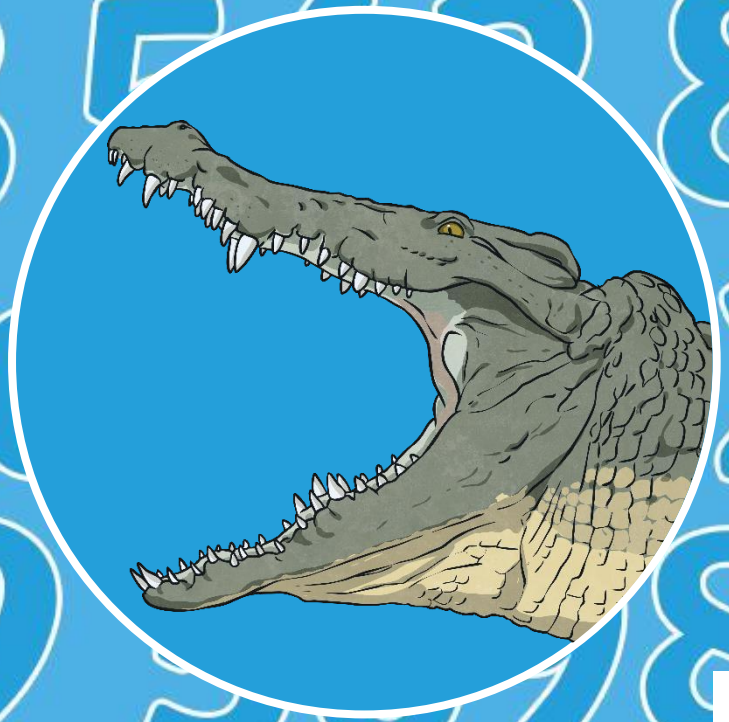
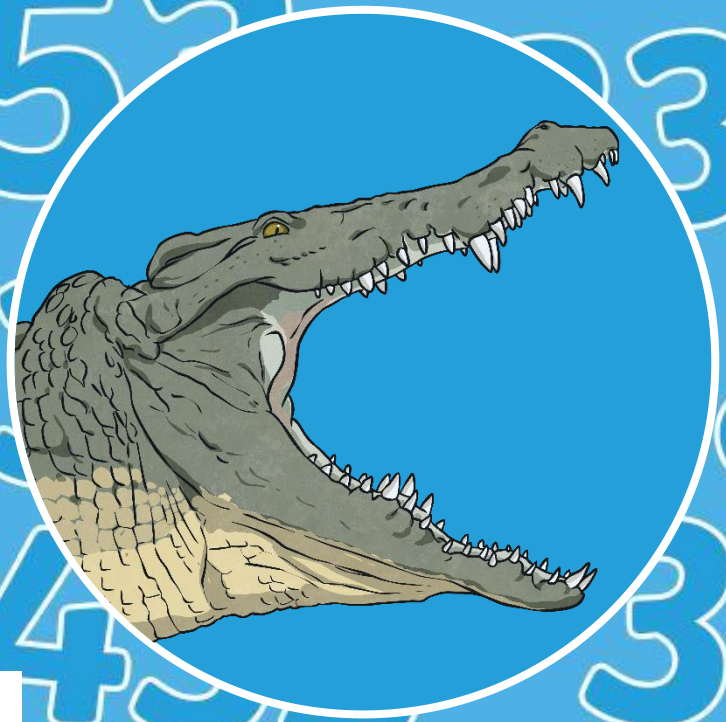
Compare and Order Numbers





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Aim

- To compare and order numbers up to 10 000 000.

Success Criteria

- I can identify the value of each digit up to 10 000 000.
- I can compare numbers up to 10 000 000.
- I can order sets of numbers up to 10 000 000.

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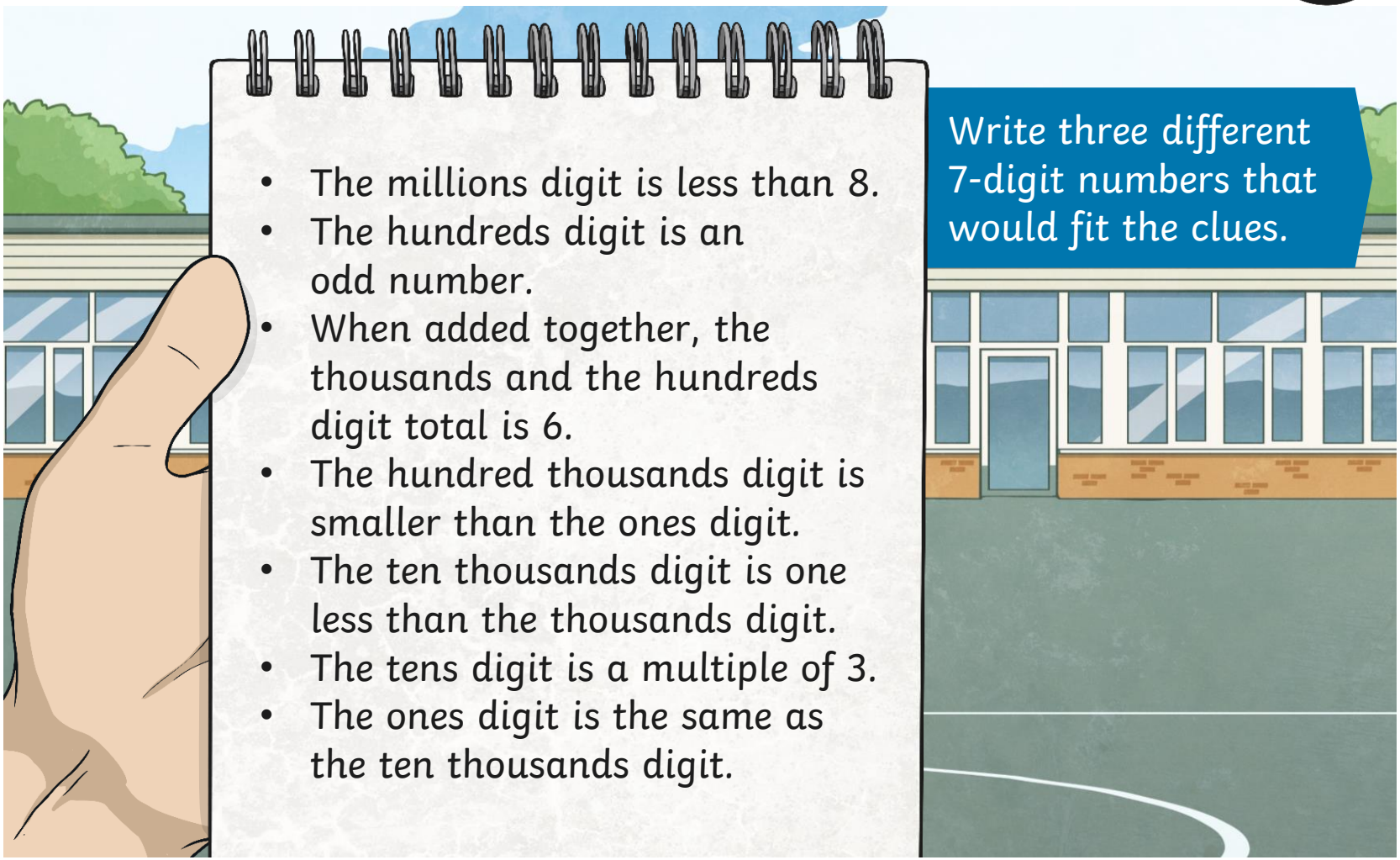
Remember It



- The millions digit is less than 8.
- The hundreds digit is an odd number.
- When added together, the thousands and the hundreds digit total is 6.
- The hundred thousands digit is smaller than the ones digit.
- The ten thousands digit is one less than the thousands digit.
- The tens digit is a multiple of 3.
- The ones digit is the same as the ten thousands digit.

Write three different 7-digit numbers that would fit the clues.

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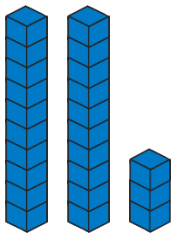
Comparing Numbers

Comparing numbers is useful for working out if one number is greater or smaller than another number.

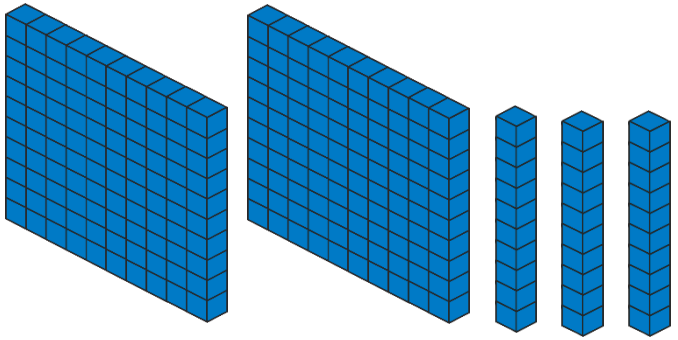
We compare numbers by looking at their digits and by understanding the place value of each digit.

Let's look at a simple example. Which number is greater, 23 or 230?

We can see that 230 is greater than 23.



23 = two tens and three ones



230 = two hundreds and three tens

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Comparing Numbers

A place value grid can also help to visualise the comparison.

Which is greater?
2 235 282 or **2 235 822**

2 235 282

M	Hth	Tth	Th	H	T	O
●●	●●	●● ●	●● ● ●	●●	●● ● ● ●	●●

2 235 822

M	Hth	Tth	Th	H	T	O
●●	●●	●● ●	●● ● ●	●● ● ● ●	●●	●●

We need to compare the place value of the digits in each number.
To do this, we always start with the digits on the left.
Be careful to check the place value of each digit in each number.
We then compare the value of each digit until the numbers are different.

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Comparing Numbers

2 235 282

M	Hth	Tth	Th	H	T	O
○○	○○	○○ ○	○○ ○○ ○	○○	●● ●● ●● ●●	●●

2 235 822

M	Hth	Tth	Th	H	T	O
○○	○○	○○ ○	○○ ○○ ○	○○ ○○ ○○ ○○	●●	●●

2 235 282 has two hundre… …35 822 has eight hundreds.
Now, we are able to compa… …s we have found two digits

2 235 822 is greater than 2 235 282.

Eight hundreds is bigger than tw… …ds. We don't need to look at any more of the digits as we have found a difference between the two numbers.

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Comparing Numbers

Which number is greater in these pairs?

If you are correct, the number will turn blue.

56 211	or	54 211
123 984	or	123 948
1 762 482	or	1 762 184
2 375 121	or	2 378 121
8 484 448	or	8 484 884

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Less Than and Greater Than

<

>

We can use these symbols to compare numbers.

Can you recall what these symbols mean, and how we use them?

<	This means 'less than'. The narrow part of the symbol points to the smaller number.
>	This means 'greater than'. The wider part of the symbol opens up towards the larger number.

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Greater Than and Less Than

Which symbol goes in each of these boxes?
Explain your choice to your partner.
Click each box to reveal the answers.

9 539 289	<	9 593 289
374 284	>	347 248
5763	>	5376
6 464 464	<	6 464 646

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Ordering Numbers

When ordering sets of numbers, use your knowledge of place

You can see all the numbers have the same amount of millions and the same amount of hundred thousands.

From greatest to smallest the order is:
3 467 222, 3 457 222, 3 453 435

The first and the last number have the same amount of ten thousands, but the first number has a greater amount of thousands.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
3	**4**	5	**7**	2	2	2
3	**4**	**6**	7	2	2	2
3	**4**	5	3	4	3	5

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Ordering Numbers

Draw your own place value chart to help you order the sets of numbers:

Greatest to Smallest	2 354 211	2 333 421	2 372 282	2 347 801
Smallest to Greatest	1 384 297	2 654 234	1 777 301	2 632 121
Smallest to Greatest	3 121 412	5 812 400	3 074 322	4 598 211

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Ordering Numbers

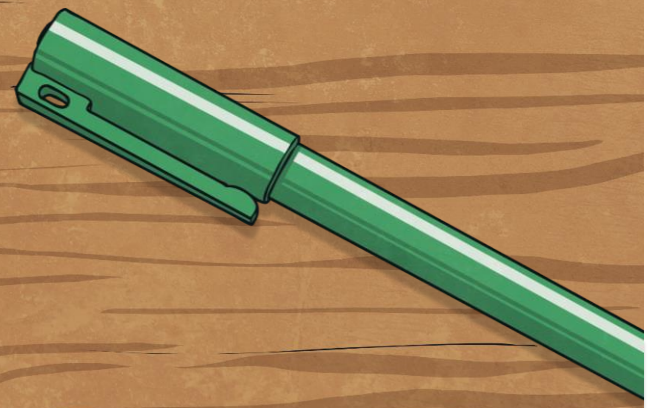
Whole Class

Look at this set of numbers:

7 576 283	**7 567 382**
7 756 382	**7 765 283**

If you put them in order from greatest to smallest, which number would be third?

Explain your choice to a partner and explain how you ordered the numbers.



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Ordering Numbers

Identify the number that has been incorrectly placed in the largest to smallest sequence. Place the number in the correct place in the sequence on a whiteboard.

1 321 573 ···· 1 321 512 ···· 1 312 521 ···· **1 203 125** ···· 1 308 521

1 321 573 ···· 1 321 512 ···· 1 312 521 ···· 1 308 521 ···· **1 203 125**

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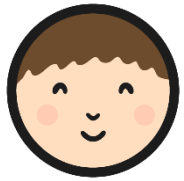
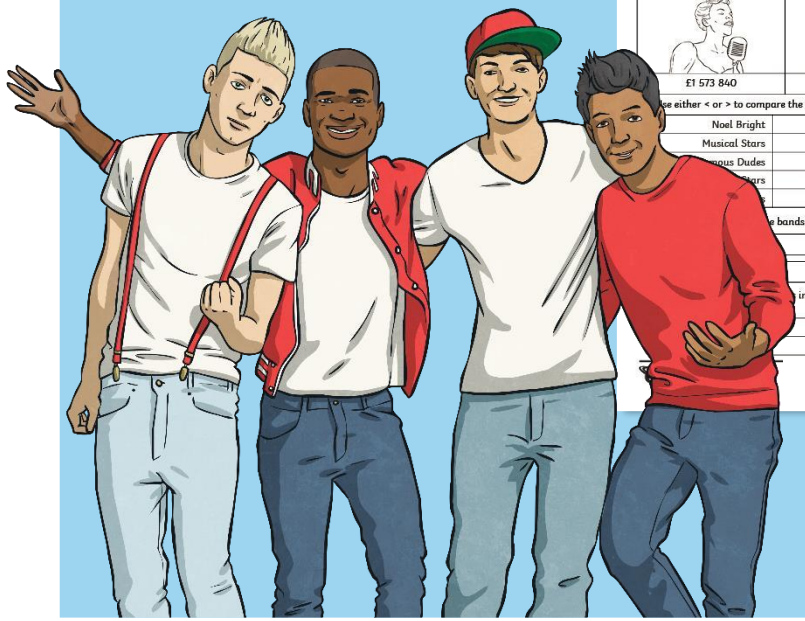
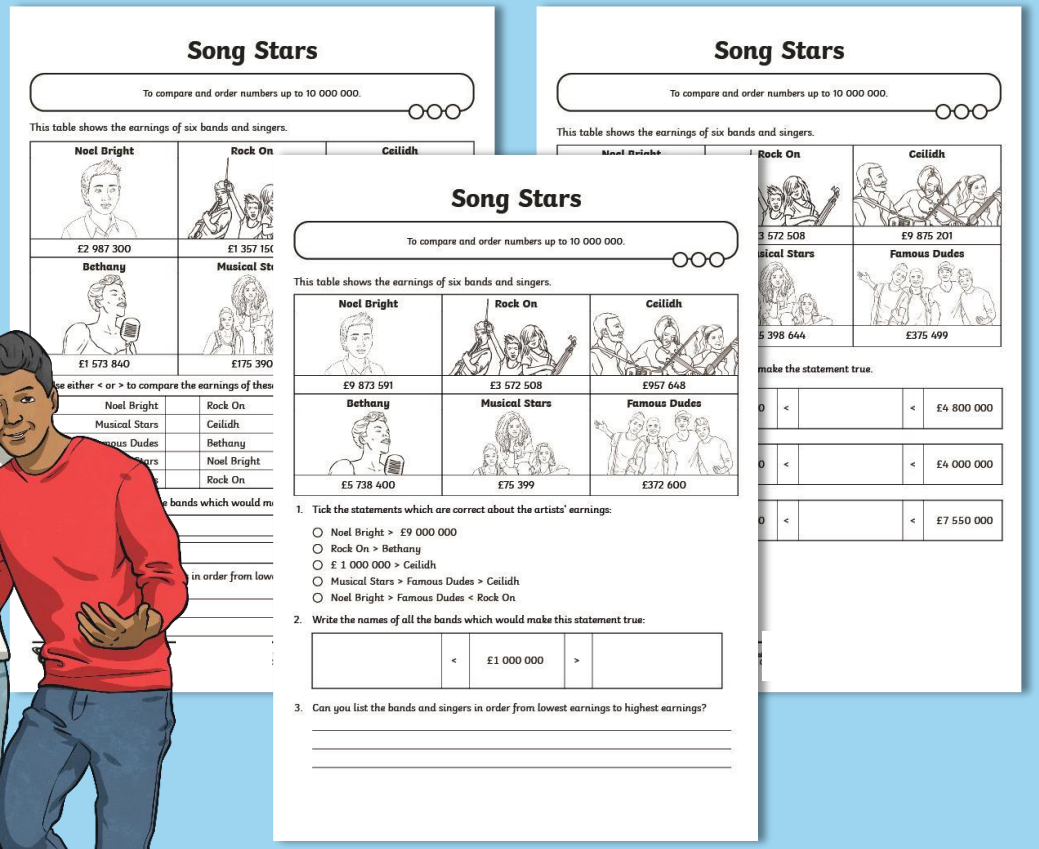
Song Stars



Solve the number puzzles on your Song Stars Activity Sheet using < and >.





Song Stars

To compare and order numbers up to 10 000 000.

This table shows the earnings of six bands and singers.

Noel Bright	Rock On	Ceilidh
£9 873 591	£3 572 508	£957 648
Bethany	**Musical Stars**	**Famous Dudes**
£5 738 400	£75 399	£372 600

1. Tick the statements which are correct about the artists' earnings:
   - ○ Noel Bright > £9 000 000
   - ○ Rock On > Bethany
   - ○ £ 1 000 000 > Ceilidh
   - ○ Musical Stars > Famous Dudes > Ceilidh
   - ○ Noel Bright > Famous Dudes < Rock On
2. Write the names of all the bands which would make this statement true:

	<	£1 000 000	>	

3. Can you list the bands and singers in order from lowest earnings to highest earnings?

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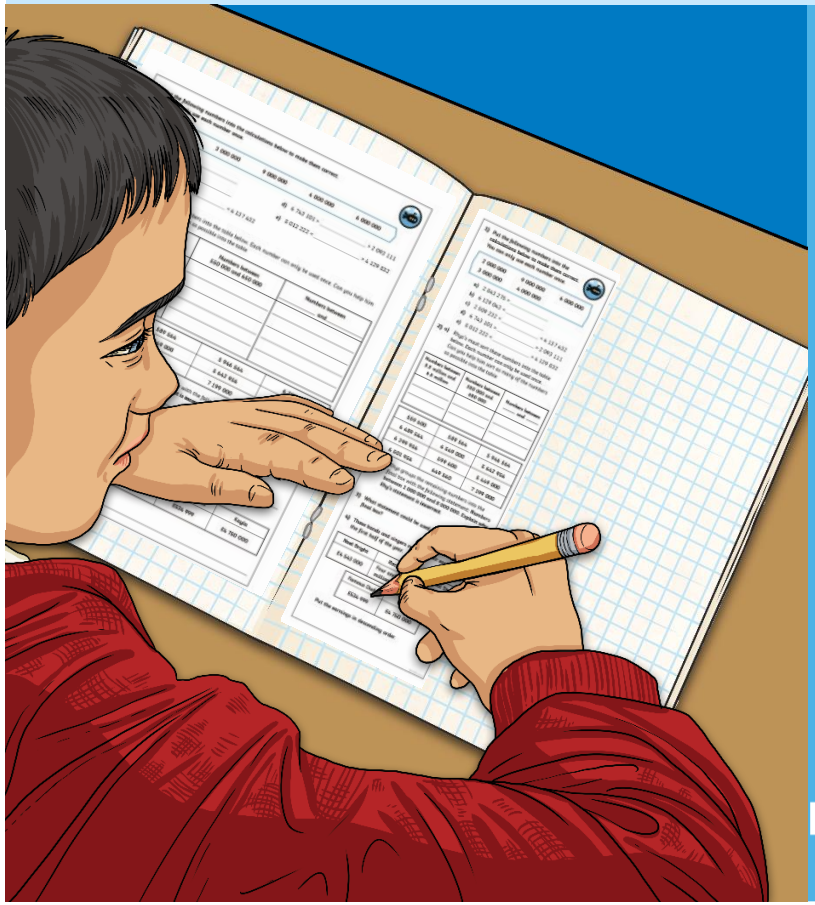
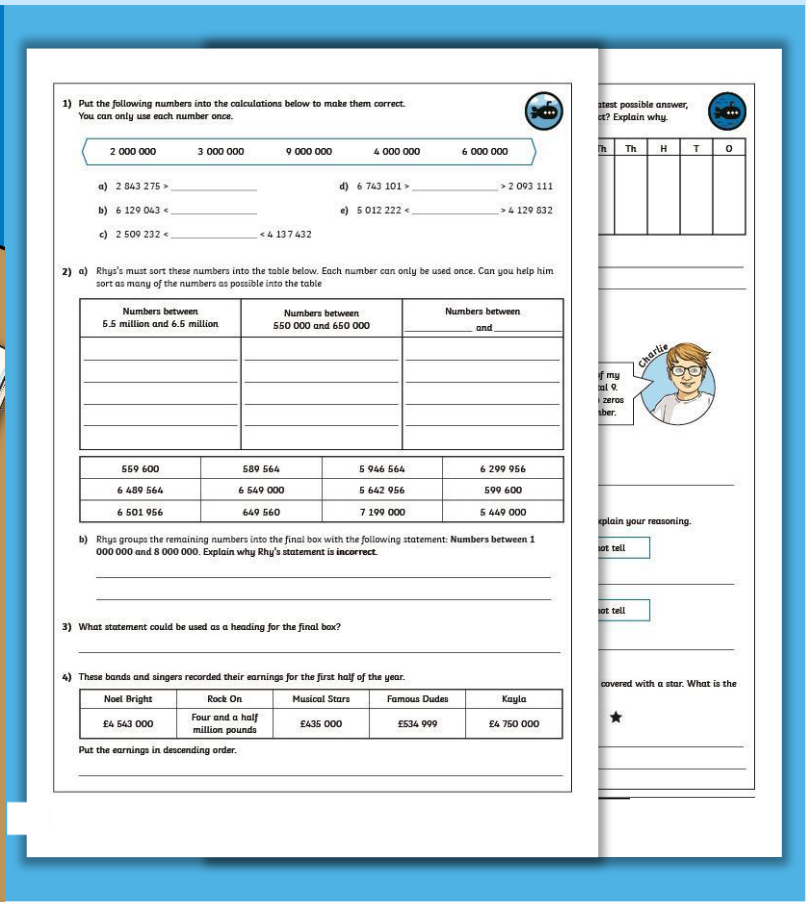
Diving into Mastery

Dive in by completing your own activity!





1) Put the following numbers into the calculations below to make them correct.
You can only use each number once.

2 000 000 | 3 000 000 | 9 000 000 | 4 000 000 | 6 000 000

a) 2 843 275 > _____

b) 6 129 043 < _____

c) 2 509 232 < _____ < 4 137 432

d) 6 743 101 > _____ > 2 093 111

e) 5 012 222 < _____ > 4 129 832

2) a) Rhys's must sort these numbers into the table below. Each number can only be used once. Can you help him sort as many of the numbers as possible into the table

Numbers between 5.5 million and 6.5 million	Numbers between 550 000 and 650 000	Numbers between _____ and _____

559 600	589 564	5 946 564	6 299 956
6 489 564	6 549 000	5 642 956	599 600
6 501 956	649 560	7 199 000	5 449 000

b) Rhys groups the remaining numbers into the final box with the following statement: **Numbers between 1 000 000 and 8 000 000. Explain why Rhy's statement is incorrect.**

3) What statement could be used as a heading for the final box?

4) These bands and singers recorded their earnings for the first half of the year.

Noel Bright	Rock On	Musical Stars	Famous Dudes	Kayla
£4 543 000	Four and a half million pounds	£435 000	£534 999	£4 750 000

Put the earnings in descending order.

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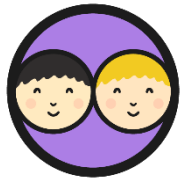
Which Number?



Which of these numbers could fit in the empty box?

4 121 490 | 3 427 718 | 4 863 215 | 4 984 725 | 4 192 367

3 983 210 < ☐ > 4 345 632

Can you think of two more numbers which would fit in the empty box?

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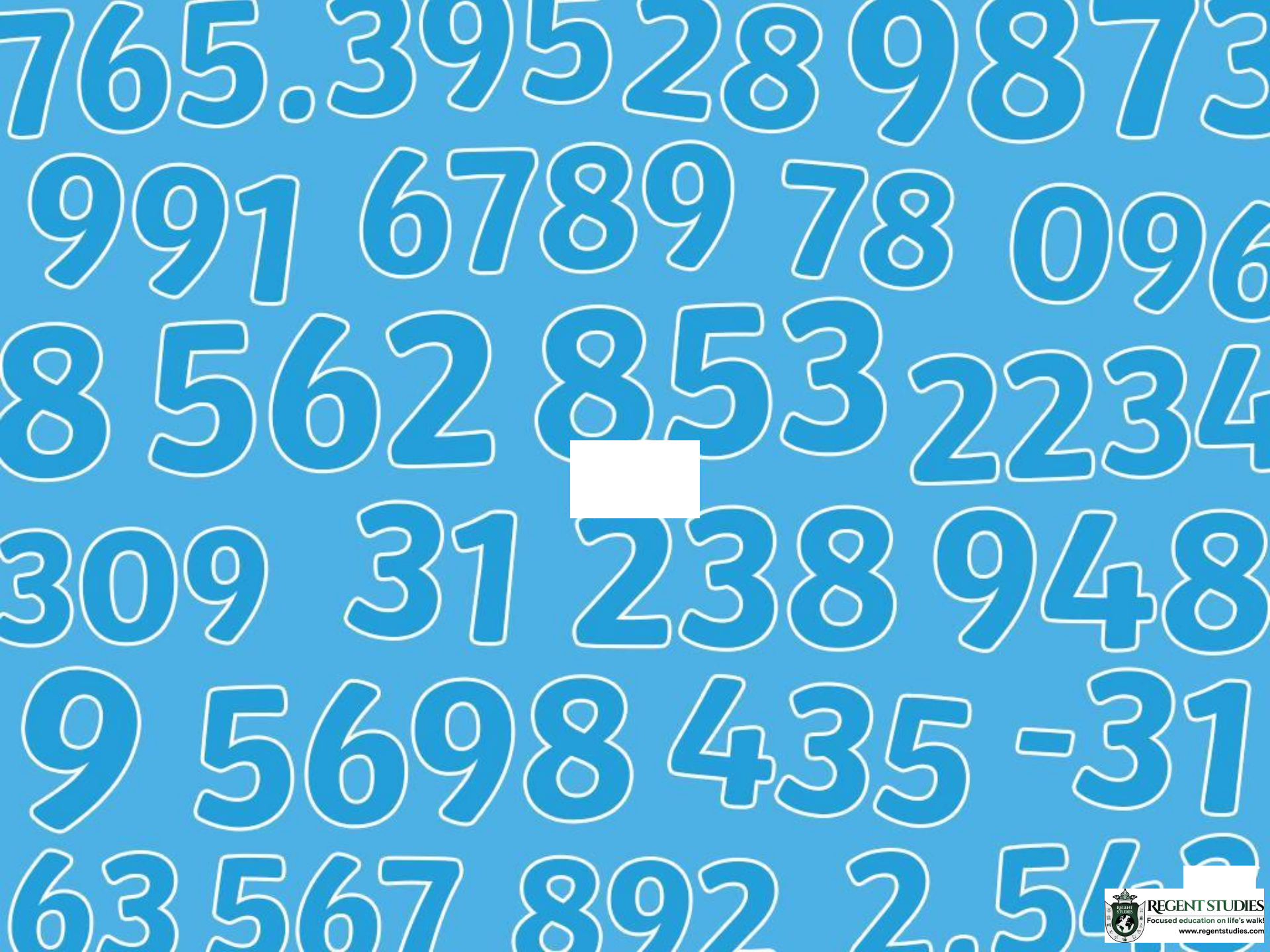

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