

Compare and Order Any Number

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

- Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.



What are the greatest and smallest possible numbers that can be used in these comparisons?

Smallest Possible Number		Greatest Possible Number
678 948	$678\ 947 < \underline{\hspace{1cm}} < 688\ 947$	688 946
2 345 624	$2\ 445\ 623 > \underline{\hspace{1cm}} > 2\ 345\ 623$	2 445 622
8 987 431	$8\ 987\ 430 < \underline{\hspace{1cm}} < 8\ 987\ 530$	8 987 529

Compare and Order Any Number

Diving



Give either the greatest or smallest possible answers that can be used to complete this comparison.

M	HTh	TTh	Th	H	T	O	M	HTh	TTh	Th	H	T	O
● ● ● ●	● ● ●	● ● ● ● ●	●	● ● ● ● ● ●	● ● ● ●	●	● ●	● ● ●		● ● ● ● ● ● ● ●	● ● ● ● ● ●		● ● ● ● ● ● ● ● ●

M	HTh	TTh	Th	H	T	O	> 4 351 650 >		M	HTh	TTh	Th	H	T	O
● ● ● ●	● ● ●	● ● ● ● ●	●	● ● ● ● ● ●	● ● ● ●	●	2 308 628		● ●	● ● ●		● ● ● ● ● ●	● ● ● ● ● ●		● ● ● ● ● ● ●



Insert a digit in each box so that the numbers are written in order from greatest to smallest.

There are many correct answers, including:

4 656 789

656 967

3 56 789

3 5 1 891

3 54 891

4 656 789

3 656 967

3 **5**56 789

3 5**4**1 891

3 54**0** 891

4 656 789

3 656 967

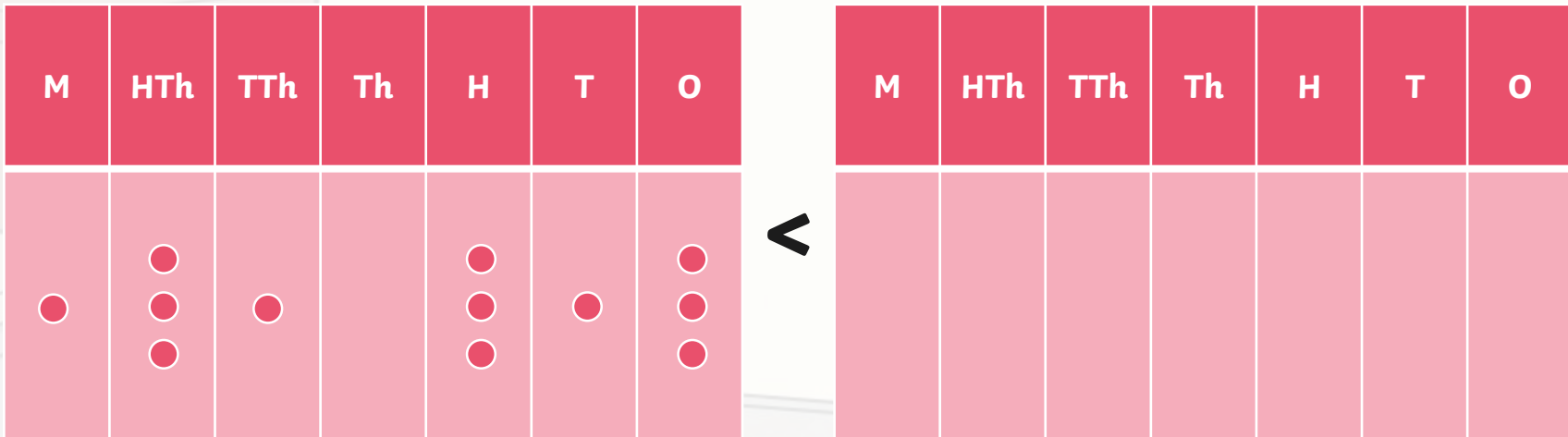
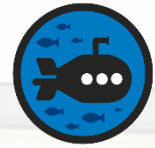
3 **6**56 789

3 5**1** 891

3 54**9** 891

Compare and Order Any Number

Deeper



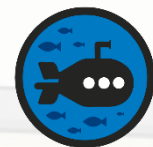
Aimee says that, in order to complete the empty place value chart with the smallest possible answer, she will need twelve counters. Is she correct?

Aimee is incorrect. The smallest possible answer is 1 310 314, which would need thirteen counters.



Compare and Order Any Number

Deeper



Charlie 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 1.5 million and 2.5 million	Numbers between 150 000 and 250 000	Numbers between _____ and _____
1 500 001	199 245	
2 001 010	150 010	
2 499 245	175 000	
1 750 010	151 010	

175 000	199 245	99 010
1 500 001	149 010	2 001 010
2 610 245	3 495 245	150 010
151 010	1 750 010	2 499 245

If Charlie wrote, for example, numbers between 99 000 and 3 495 245, he would find that some of the numbers he has already sorted belong in his new box. If he does this, he will not be correctly sorting them as he would have to use some of the numbers twice.

Compare and Order Any Number

Deepest



Each pupil has a number. Can you work out the number each pupil has by using their statements?

Jessica says, "To get my number, you take Alfie's number away from Sophie's number and then add one hundred thousand."



1 050 000

Alfie says, "My number is half of Sophie's number."



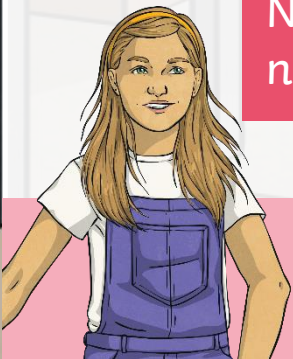
950 000

Nizar says, "My number is all of the other children's numbers added together and divided by one thousand."



3900

Sophie says, "My number is one hundred thousand less than two million."



1 900 000

Compare and Order Any Number

Deepest



1

3

7

6

8

2

5

Use the digit cards to make ten different numbers which are between 100 000 and 300 000. You can only use a digit card once in each number. Can you find:

- two numbers with the greatest total;
- two numbers with the smallest total;
- numbers with a digit sum greater than 28?

Accept ten different values that are greater than 100 000 and less than 300 000.

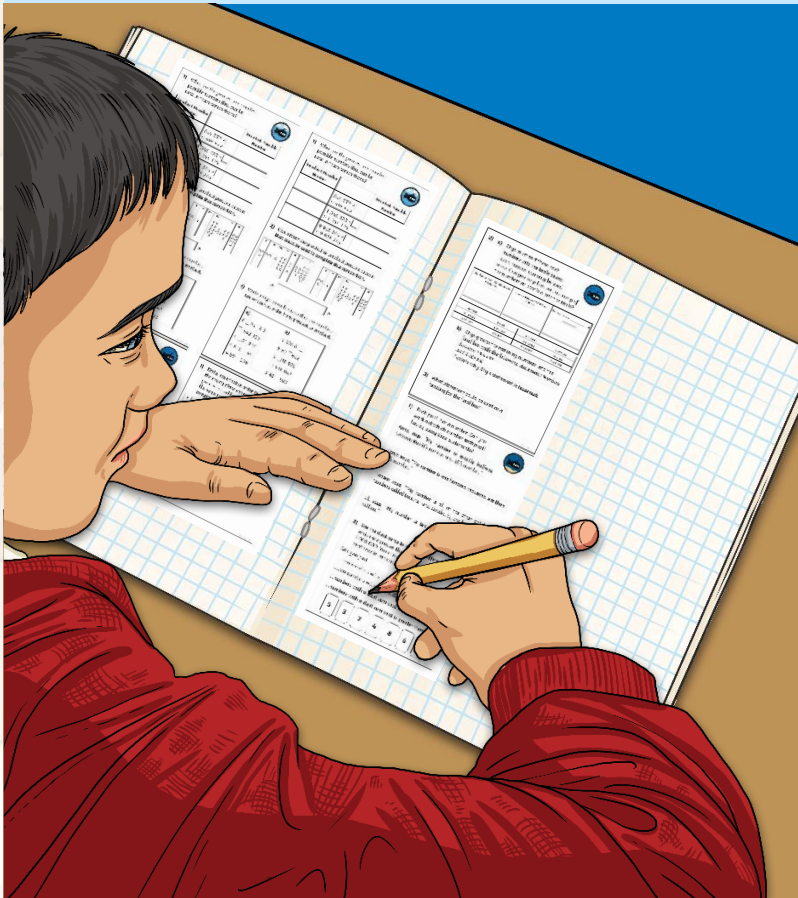
The greatest sum possible will be 575 304.

The smallest sum possible is 247 135.

Other answers will vary depending on which numbers the children create.

Compare and Order Any Number

Dive in by completing your own activity!



1) Emily says that in order to compare numbers she must use the same number of digits. Do you agree?

M	HTh	TTh	Th	T	O
○	○	○ ○	○ ○	○ ○	○ ○

2) a) Rhys must sort these numbers. Can you help him sort as many as you can?

Numbers between 5.5 million and 6.5 million

599 600
6 489 564
6 301 956

b) Rhys groups the remaining numbers into two groups. Explain why Rhys's statements are correct.

3) What statement could be used to compare the numbers in each group?

1) What are the greatest and smallest possible numbers that can be used in these comparisons?

Smallest Possible Number		Greatest Possible Number
	$564\ 572 < \square < 565\ 572$	
	$1\ 346\ 125 > \square > 1\ 344\ 124$	
	$9\ 968\ 246 < \square < 9\ 978\ 246$	

2) Give either the greatest or smallest possible answer that could be used to complete this comparison.

M	HTh	TTh	Th	H	T	O
○ ○	○ ○	○	○ ○ ○ ○	○	○ ○	○ ○ ○ ○

M	HTh	TTh	Th	H	T	O
○ ○	○ ○	○	○ ○ ○ ○	○ ○	○ ○	○ ○ ○ ○

> >

3) Write a digit in each box so that the numbers are written in order from greatest to smallest.

a)	b)
6 _ 26 19 2	6 505 61_
_ 642 913	6 50_ 612
4 _ 51 914	6 _ 18 956
4 8 1 195	418 967
4 89_ 196	5 41_ 989

Need Planning to Complement this Resource?

National Curriculum Aim

Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.

For more planning resources to support this aim, [click here](#).

This collage features three main educational cards. The top-left card, titled 'Comparing Numbers', explains how to compare numbers by looking at their digits and includes a bar chart comparing 230 and 23. The top-middle card, 'Greater Than and Less Than', features a large play button icon and an illustration of two people. The top-right card, 'Song Stars', includes a play button icon and an illustration of a group of people. Below these are two smaller cards: 'Number and Place Value: Greater Than and Less Than' on the left and 'Song Stars' on the right, which includes a grid with numbers like 84,900, 85,000, 0.6, 0.5, 0.3, 0.1, 0.2, 0.4, 6.7, 7430, 7300, and 7200.

This collage features three main educational cards. The top-left card, 'Comparing Decimals', compares 3.27 and 3.4 and includes a play button icon. The top-middle card, 'Number Squeeze', features a large play button icon and an illustration of a person in a uniform. The top-right card, 'Number Line Squeeze', includes a play button icon and an illustration of two people. Below these are two smaller cards: 'Number and Place Value: Number Squeeze' on the left and 'Number Line Squeeze' on the right, which includes a number line with the numbers 0.04 and 6.7 highlighted.



