## Maths Mastery <br> Read. Writie Order and Compare Numbers खp to 1000000



## Read

Work with a partner:
One partner writes down a six-digit number.
The other reads the number.
If they read it correctly, they write a number for the first partner.
Include some zeros to challenge.


## Write

Work with a partner:
One partner writes down a hidden six-digit number and reads it for the other. The other partner writes it down. Check the numbers match.

If they are the same, swap roles.
If incorrect, check it has been read correctly.


## Order

If the digits 1 and 2 were chosen:

| 111111 | 121111 | 211111 | 221111 |
| :---: | :---: | :---: | :---: |
| 111112 | 121112 | 211112 | 221112 |
| 111121 | 121121 | 211121 | 221121 |
| 111122 | 121122 | 211122 | 221122 |
| 111211 | 121211 | 211211 | 221211 |
| 111212 | 121212 | 211212 | 221212 |
| 111221 | 121221 | 211221 | 221221 |
| 111222 | 121222 | 211222 | 221222 |
| 112111 | 122111 | 212111 | 222111 |
| 112112 | 122112 | 212112 | 222112 |
| 112121 | 122121 | 212121 | 222121 |
| 112122 | 122122 | 212122 | 222122 |
| 112211 | 122211 | 212211 | 222211 |
| 112212 | 122212 | 212212 | 222212 |
| 112221 | 122221 | 212221 | 222221 |
| 112222 | 122222 | 212222 | 222222 |

## Compare

Work with a partner:
Choose six digit cards each.
Both partners write and hide a six-digit number using the six digits.
Toss a coin - heads is higher, tails lower.
Compare the numbers - who has the higher or lower number?
Remember to keep the score.

## Value

Here is a 6-digit number:

## 123456

Write down the numbers that are:

1. one thousand more
124456
2. ten less
123446
3. one hundred less
123356
4. a hundred thousand more 223456
5. twenty thousand less 103456
6. nine more 123465

With a calculation, how can you reverse the last:
three digits $\quad+198$
four digits +3087
five digits $\quad+41976$
six digits $\quad+530865$


## Read and Write Numbers

LO: I can read and write numbers.

1. Write the following numbers in words:

4819
3008
5191
2. Write the following numbers in numerals:

Three thousand and sixteen

Nine thousand, four hundred and twenty-six


Seven thousand, eight hundred and forty

3. For each number below, explain the mistake in writing the number in words. 2019 = two thousand and ninety
$\qquad$
$\qquad$
$\qquad$
$6970=$ six hundred and ninety-seven
$\qquad$
$\qquad$
$\qquad$
4. For each number below, explain the mistake in writing the number in numerals.

Six thousand, four hundred and nine $=649$
$\qquad$
$\qquad$
$\qquad$
One thousand, four hundred and twenty-one $=1241$
$\qquad$
$\qquad$
$\qquad$

## Read and Write Numbers

LO: I can read and write numbers.

1. Write the following numbers in words:

56012
30070
89329
2. Write the following numbers in numerals:

Seventeen thousand and sixty


Twenty-four thousand, nine hundred and twenty-two


Ninety thousand, three hundred and fourteen

3. For each number below, explain the mistake in writing the number in words. 40912 = four thousand, nine hundred and twenty
$\qquad$
$\qquad$
$\qquad$
17902 = one thousand, seven hundred and ninety-two
$\qquad$
$\qquad$
$\qquad$
4. For each number below, explain the mistake in writing the number in numerals.

Sixty-six thousand, six hundred and sixteen = 66166
$\qquad$
$\qquad$
$\qquad$
Eighty-one thousand, one hundred and eighteen $=8118$
$\qquad$
$\qquad$
$\qquad$

## Read and Write Numbers

LO: I can read and write numbers.
Work with a partner, checking your work together.

1. Ask your partner to write three numbers in numerals, of four or five digits. Read the numbers to your partner.

2. Ask your partner to write three numbers in words, of four or five digits. Read the numbers to your partner and write the number in numerals.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
3. Write three numbers of your own in numerals, of four or five digits. Read them in turn to your partner and write them in numerals and words:

| My numbers | My partner's numbers |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |

4. On your partner's sheet, write a number in words and then write it in numerals making a mistake.

On your own sheet explain the mistake made by your partner.

Mistake:

## Read and Write Numbers

5. On your partner's sheet, write a number in numerals and then write it in words making a mistake.
$\qquad$

Mistake: $\qquad$
$\qquad$
$\qquad$

## Read and Write Numbers Answers

## Page1

1. 4819 - four thousand, eight hundred and nineteen

3008 - three thousand and eight
5191 - five thousand, one hundred and ninety-one
2.Three thousand and sixteen - 3016

Nine thousand, four hundred and twenty-six-9426
Seven thousand, eight hundred and forty - 7840
3.2019 = two thousand and ninety - 19 has been written ninety (90) but should be nineteen.

The answer is two thousand and nineteen.
$6970=$ six hundred and ninety seven - The zero has been ignored so the place value has been misread. The 6 is six thousand not six hundred, the 9 is nine hundred not ninety and the 7 is seventy not seven. The answer is six thousand, nine hundred and seventy.
4. Six thousand, four hundred and nine $=649$

The zero (no tens) has been missed out. The six thousands and four hundreds have been written as six hundreds and four tens. The answer is 6409.
One thousand, four hundred and twenty-one $=1241$
The 2 and 4 have been mixed up. There are four hundreds, but the 2 has been used. There are 2 tens, but the 4 has been used. The answer is 1421.

## Page2

1. 56012 - fifty-six thousand and twelve

30070 - thirty thousand and seventy
89329 - eighty nine thousand, three hundred and twenty-nine
2. Seventeen thousand and sixty-17060

Twenty-four thousand, nine hundred and twenty-two-24922
Ninety thousand, three hundred and fourteen -90314
3.40912 = four thousand, nine hundred and twenty - The forty (40) thousand has been written as four thousand, and the twelve (12) at the end of the number has been written as twenty (20). The answer is forty thousand, nine hundred and twelve.

17902 = one thousand, seven hundred and ninety two - The zero has been ignored so the place value has been misread. The 17 is seventeen thousand not one thousand, seven hundred; the 9 is nine hundred not ninety. The answer is seventeen thousand, nine hundred and two.
4. Sixty-six thousand, six hundred and sixteen = 66166

The one has been placed in the wrong place. The sixteen (16) needs to be in the final two places. The answer is 66616.
Eighty-one thousand, one hundred and eighteen $=8118$
The number should have five digits, the answer being 81 118. There are several possible reasons for the incorrect answers: simply missing out a digit (1 in hundreds or tens place), misunderstanding the need to have three digits after the 81 and only putting 18 to represent 118 , or reading eighteen as 80 and missing off the 0 .

## Read and Write Numbers

LO: I can read and write numbers.

1. Write the following numbers in words:

209817
500040
120371
2. Write the following numbers in numerals:

Seventeen thousand and sixty


Twenty-four thousand, nine hundred and twenty-two

Ninety thousand, three hundred and fourteen

3. For each number below, explain the mistake in writing the number in words.

710981 = seventy one thousand, nine hundred and eighteen
$\qquad$
$\qquad$
$\qquad$
511007 = fifty-one and one thousand, seven hundred.
$\qquad$
$\qquad$
$\qquad$
4. For each number below, explain the mistake in writing the number in numerals.

Two hundred and six thousand, nine hundred and twenty = 2690020
$\qquad$
$\qquad$
$\qquad$
Three hundred thousand, six hundred and sixty $=366$
$\qquad$
$\qquad$

## Read and Write Numbers

LO: I can read and write numbers.
Work with a partner, checking your work together.

1. Ask your partner to write three six-digit numbers in numerals. Read the numbers to your partner.

2. Ask your partner to write three six-digit numbers in words. Read the numbers to your partner and write the number in numerals.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
3. Write three six-digit numbers of your own in numerals. Read them in turn to your partner and write them in numerals and words:

| My numbers | My partner's numbers |  |
| :--- | :--- | :--- |
|  |  |  |
|  |  |  |
|  |  |  |

4. On your partner's sheet, write a six-digit number in words and then write it in numerals making a mistake.

On your own sheet explain the mistake made by your partner.

Mistake: $\qquad$
$\qquad$
$\qquad$

## Read and Write Numbers

5. On your partner's sheet, write a number in numerals and then write it in words making a mistake.

Mistake: $\qquad$

## Read and Write Numbers Answers

1. 209817 -two hundred and nine thousand, eight hundred and seventeen

500040 - five hundred thousand and forty
120371 - one hundred and twenty thousand, three hundred and seventy-one
2. Seven hundred and thirteen thousand and forty-nine - 713049

One hundred and forty-four thousand, two hundred and ninety-two - 144292
Six hundred and ninety thousand and seven - 690007
3.710981 = seventy one thousand, nine hundred and eighteen

The zero has been missed out so seven hundred and ten thousand has been written as seventy one thousand. The eighty-one (81) at the end of the number has been written as eighteen (18) mixing up the 8 and 1 . The answer is seven hundred and ten thousand, nine hundred and eighty-one.
511007 = fifty-one and one thousand, seven hundred.
The five hundred and eleven (thousand) has been mistakenly written as fifty-one and one, showing a misunderstanding of the place value of the 5 and first 1 , which are hundred thousands and ten thousands. Also the final seven has been written as seven hundred, when it is in the ones place so has a value of seven. The answer is five hundred and eleven thousand and seven.
4. Two hundred and six thousand, nine hundred and twenty $=2690020$

The zero in two hundred and six (206) has been missed out. The nine hundred has been written without writing the twenty as part of this section of the number. Nine hundred and twenty is written 920 without the extra zeros. The answer is 206920.
Three hundred thousand, six hundred and sixty $=366$
All the zeros are missing. The three hundred thousand is missing the zeros and the six hundred and sixty is written 66, so is also missing a zero, as it should be 660. The combination of this error is that the three is no longer even thousands but simply hundreds. The answer is 300660.

## Read and Write Numbers

LO: I can read and write numbers.

1. Explain possible mistakes that can be made when writing the number three hundred and six thousand, two hundred and fifteen in numerals.
$\qquad$
$\qquad$
$\qquad$
2. Write instructions in the space below showing how to write the number 405912 in words.
3. Calculate the answer to these without writing the numbers in numerals:

Two hundred and sixty-five thousand, nine hundred and six add four hundred and sixteen thousand and forty-seven equals.
4. What is the difference between three hundred and eighty thousand, two hundred and seventy-four and eight hundred and thirty-seven thousand, three hundred and ninety-one?

## Read and Write Numbers

LO: I can read and write numbers.

Work with a partner, checking your work together.

1. Each write three digits. Combine the digits and each write the largest number possible in numerals and words.
$\qquad$

Repeat, writing the smallest number in words and numerals.
$\qquad$

Repeat writing the number closest to 500000.
$\qquad$
$\qquad$

Try closest to other numbers.
$\qquad$
$\qquad$
2. Each write a six-digit number in numerals. Calculate and write the sum and difference in words.

Each write a six-digit number in words. Calculate and write the sum and difference in words.

Each write a six-digit number in numerals. Calculate and write the number half way between the numbers in words.

## Read and Write Numbers Answers

1. Answers will vary
2. Answers will vary
3. Six hundred and eighty-one thousand, nine hundred and fifty-three.
4. Four hundred and fifty-seven thousand, one hundred and seventeen.

## Order and Compare Numbers

Aim: I can order and compare numbers.

1. Use the following symbols to compare the following numbers: <, = or >

2. Order the following sets of numbers from smallest to largest:

3838, 3883, 8388, 8838, 3383


6701, 6071, 1076, 1067, 7016


9008, 8009, 908, 8090, 9080

3. Explain why $6581>6518$.
$\qquad$
$\qquad$
4. Explain how to order the following numbers from smallest to greatest: 4514, 451, 4415, 1445, 4414.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Order and Compare Numbers

Aim: I can order and compare numbers.
A set of single-digit cards is required for these tasks.
Work with a partner, checking your work together.

## Compare

1. From a set of single-digit cards, deal four cards each. Use the cards to make a number.

Toss a coin. If the coin lands on heads, the greater number wins a point. If the coin lands on tails, the smaller number wins a point.

Keep a record of your score.
Write the numbers in your books with the relevant comparison symbol to keep a record.
2. Take it in turns to take four digit cards from a set.

Make a four-digit number and place it in the following grid.
Take it in turns to create a number. If a partner cannot put a number in the grid, the other player gains a point. Keep a record of your score.

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest
greatest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

## Order and Compare Numbers

Aim: I can order and compare numbers.

1. Use the following symbols to compare the following numbers: <, = or >

2. Order the following sets of numbers from smallest to largest:

72 727, 27 727, 27 277, 77 227, 72272


61 234, 61 423, 6432, 62 431, 62143

$39009,30090,30900,39090,30009$
$\square$
3. Explain why $78632>78362$.
$\qquad$
$\qquad$
4. Explain how to order the following numbers from smallest to greatest: $87878,88787,88$ 887, $87787,78778$.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Order and Compare Numbers

Aim: I can order and compare numbers.
A set of single-digit cards is required for these tasks.

Work with a partner, checking your work together.

## Compare

1. From a set of single-digit cards, deal five cards each. Use the cards to make a number.

Toss a coin. If the coin lands on heads, the greater number wins a point. If the coin lands on tails, the smaller number wins a point.

Keep a record of your score.
Write the numbers in your books with the relevant comparison symbol to keep a record.
2. Take it in turns to take four digit cards from a set.

Make a five-digit number and place it in the following grid.
Take it in turns to create a number. If a partner cannot put a number in the grid, the other player gains a point. Keep a record of your score.

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest
greatest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

## Order and Compare Numbers

Aim: I can order and compare numbers.

1. Use the following symbols to compare the following numbers: <, = or >

2. Order the following sets of numbers from smallest to largest:
$320023,302023,323230,302$ 203, 323203


110 011, 101 101, 10 101, 10011,101001


785 392, 857 392, 587 392, 578 392, 758392

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

3. Explain why $382562>380652$.
$\qquad$
$\qquad$
4. Explain how to order the following numbers from smallest to greatest: 656 566, 665 656, 665 565, 655 556, 565665.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Order and Compare Numbers

Aim: I can order and compare numbers.
A set of single-digit cards is required for these tasks.
Work with a partner, checking your work together.

## Compare

1. From two sets of single-digit cards, deal six cards each. Use the cards to make a number.

Toss a coin. If the coin lands on heads, the greater number wins a point. If the coin lands on tails, the smaller number wins a point.

Keep a record of your score.

## Order

2. Take it in turns to take six digit cards from a set.

Make a six-digit number and place it in the following grid.
Take it in turns to create a number. If a partner cannot put a number in the grid the other player gains a point. Keep a record of your score.

smallest

smallest

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

smallest
greatest

smallest
greatest

smallest

## Order and Compare Numbers

Aim: I can order and compare numbers.
Work with a partner, checking your work together.

## Compare

1. Each partner writes a number on a small whiteboard or piece of paper, hidden from their partner. Each partner can ask, in turn, three questions of their partner, with yes or no answers. They then estimate whether their number is smaller or greater than their partner's number.
Keep a record of your score.
Write the numbers in your books with the relevant comparison symbol to keep a record.

## Order

2. Cut out six small pieces of paper to fit the grid below. The activity is done without talking.

Each partner writes three numbers on a piece of paper, hidden from their partner. Take it in turns to place the numbers on the grid, keeping the numbers on the grid in order from smallest to greatest. If a partner cannot place one of their numbers, they can move an existing number on the grid instead.

The aim is to place all the numbers on the grid in the least amount of turns possible.

smallest

# Order and Compare Numbers Answers 

Lower Ability

1. $2783<2873$

3041>3014
9377<9773
2.

| 3383 | 3838 | 3883 | 8388 | 8838 |
| :---: | :---: | :---: | :---: | :---: |
| 1067 | 1076 | 6071 | 6701 | 7016 |
| 908 | 8009 | 8090 | 9008 | 9080 |

3. Both 6581 and 6518 have six thousands and five hundreds. However, 6581 has eight tens, which is more than the one ten in 6518, so 6581 is greater than 6518.
4. All the numbers have four digits except 451, which only has three, or has no thousands, so is the smallest.

1445 only has one thousand, so is smaller than the other three remaining numbers, which all have four thousands.

The next largest numbers are 4414 and 4415, which have four hundreds, as the other, 4514, has five hundreds. 4414 and 4415 are consecutive numbers with 4414 the smaller as it has four ones and 4415 has five ones.

This leaves 4514 as the largest number. The order is: 451, 1445, 4414, 4415, 4514.

1. $34414>34144$
$56656>56655$
$10010<11010$
2. 

| 27277 | 27727 | 72272 | 72727 | 77227 |
| :---: | :--- | :--- | :--- | :--- |
| 6432 | 61234 | 61423 | 62143 | 62431 |
| 30009 | 30090 | 30900 | 39009 | 39090 |

3. Both 78632 and 78362 have seven ten thousands and eight thousands. However 78632 has six hundreds, which is more than the three hundreds in 78362 , so 78 632 is greater than 78362.
4. All the numbers have five digits. However, all have eight ten thousands except 78 778, which only has seven ten thousands so is the smallest number.

The two numbers 87878 and 87787 have seven thousands, so they are the next numbers in the sequence as the other numbers have eight thousands. 87787 is smaller than 87878 because is has seven hundreds compared to eight hundreds.

Of the final two numbers, 88787 and 88878,88787 is smaller as it has seven hundreds, which is less than the eight hundreds in 88878.

The order is: $78778,87787,87878,88787$, 88878.

# Order and Compare Numbers Answers 

Higher Ability

1. $676767<677767$
$100010>10100$
$782391<782481$
2. 

| 302023 | 302203 | 320023 | 323203 | 323230 |
| :---: | :---: | :---: | :---: | :---: |
| 10011 10101 101001 101101 | 110011 |  |  |  |


| 578392 | 587392 | 758392 | 785392 | 857392 |
| :--- | :--- | :--- | :--- | :--- |

3. Both 382562 and 380652 have three hundred thousands and eight ten thousands. However 382562 has two thousands, which is more than the 0 thousands in 380 652, so 382562 is greater than 380652.
4. All the numbers have six hundred thousands except 565 665, so this is the smallest.

Next, looking at the ten thousands, 655 556 and 656566 have five ten thousand, whereas the other numbers have six ten thousands. The five thousands in 655556 make it smaller than 656566.

Finally 665656 and 665565 both have five thousands, but 665565 has five hundreds, which is less than the six hundreds in 665 656.

The order is: 565 665, 655 556, 656 566, 665 565, 665656.

