

Year 6:

Read, Write, Order and Compare

Mastery Challenge Cards



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1. Pavel writes the number 31 097 in words:

**Three thousand, one hundred
and ninety-seven**

Explain the mistakes and any
common misconceptions.



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2. Nikita writes the number 102 415 in words:

**One hundred, twenty
thousand, four hundred
and fifty**

Explain the mistakes and any
common misconceptions.



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3. George writes the number 712 390 in words:

**Seventy-one thousand,
two hundred and thirty
ninety.**

Explain the mistakes and any
common misconceptions.



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4. Pavel writes the number sixty thousand, two hundred and four in numerals:



6204

Explain the mistakes and any common misconceptions.

5. Nikita writes the number seven hundred and fourteen thousand and nine in numerals:



714 000 9

Explain the mistakes and any common misconceptions.

6. George writes the number four hundred thousand and thirty-eight in numerals:.



438

Explain the mistakes and any common misconceptions.

7. Pavel compares the two numbers:



816 352 < 860 002

Identify and explain which digits Pavel has used to make this comparison.

8. Nikita compares the two numbers:



$$723\ 405 > 723\ 045$$

Identify and explain which digits Nikita has used to make this comparison.

9. George compares the two numbers:



$$34\ 572 < 304\ 572$$

Explain which digits George has used to make this comparison.

10. Pavel orders these numbers from smallest to largest:

27 854 27 845 28 754 28 745



Explain the mistakes and any common misconceptions.

11. Nikita orders these numbers from smallest to largest:

172 450 17 540 177 450 177 054



Explain the mistakes and any common misconceptions.

12. George orders these numbers from smallest to largest:

564 039 560 439 506 439 564 309

Explain the mistakes and any common misconceptions.



Year 6: Read, Write, Order and Compare **Answers**

1. Pavel writes the number 31 097 in words:

Three thousand, one hundred and ninety-seven

Explain the mistakes and any common misconceptions.

The 0 (zero) has been left out of the number in words so the 3 ten thousands and 1 thousand have been written as 3 thousands and 1 hundred. The answer is thirty-one thousand and ninety-seven.

2. Nikita writes the number 102 415 in words:

One hundred twenty thousand, four hundred and fifty

Explain the mistakes and any common misconceptions.

The 0 (zero) and 2 have been incorrectly placed so the one hundred and two thousand has been written as one hundred and twenty thousand. The 15 has been written as fifty, not fifteen. The answer is one hundred and two thousand, four hundred and fifteen.

3. George writes the number 712 390 in words:

Seventy-one thousand, two hundred and thirty ninety.

Explain the mistakes and any common misconceptions.

The place value of the 7, 1, 2, 3 and 9 digits are misunderstood and are written one place value to the right (10 times smaller). "Thirty ninety" is also incorrect, and comes from the incorrect place value of the 9. The number is seven hundred and twelve thousand, three hundred and ninety.

4. Pavel writes the number sixty thousand, two hundred and four in numerals:

6204

Explain the mistakes and any common misconceptions.

The sixty thousand has been written as 6 (thousand). The answer is 60 204.

5. Nikita writes the number seven hundred and fourteen thousand and nine in numerals:

714 000 9

Explain the mistakes and any common misconceptions.

The nine is incorrectly placed and should take the place of the final 0. A common misconception is to write the three 0s to represent "thousand", whereas it should be three digits, in this case, 009. The answer is 714 009.

6. George writes the number four hundred thousand and thirty-eight.

438

Explain the mistakes and any common misconceptions.

The four hundred thousand is placed in the hundreds place, not the hundred thousands place. The answer is 400 038.

Year 6: Read, Write, Order and Compare **Answers**

7. Pavel compares the two numbers:

$$816\ 352 < 860\ 002$$

Identify and explain which digits Pavel has used to make this comparison.

Pavel used the 6 ten thousands in 860 002 which is more than the 1 ten thousand in 816 352 because the highest value digit (8 hundred thousands) is the same in both numbers.

8. Nikita compares the two numbers:

$$723\ 405 > 723\ 045$$

Identify and explain which digits Nikita has used to make this comparison.

The first three digits of each number are the same and have the same value (seven hundred twenty-three thousand). Therefore, Nikita uses the 4 hundred of 723 405, which is greater than the 0 hundred of 723 045.

9. George compares the two numbers:

$$34\ 572 < 304\ 572$$

Explain which digits George has used to make this comparison.

George recognised that the larger number (304 572) has 6 digits and the smaller (34 572) has only five digits even though the first 2 digits 34 and 30 might indicate that the number beginning 34 is larger.

10. Pavel orders these numbers from smallest to largest:

$$27\ 854 \quad 27\ 845 \quad 28\ 754 \\ 28\ 745$$

Pavel has repeated the same mistake twice. The first 2 need swapping due to the tens, and the last 2 need swapping due to the tens. In both cases, the numbers have the same ten thousands, thousands and hundreds, but 4 tens are less than 5 tens. Pavel may have been misled by the ones.

11. Nikita orders these numbers from smallest to largest:

$$172\ 450 \quad 17\ 540 \quad 177\ 450 \\ 177\ 054$$

Nikita has misread the number 17 540 and possibly seen that the number begins 175 so placed it after 172 450. However as 17 540 has no hundred thousands, it is smaller than 172 450. Nikita has also placed the last 2 numbers the incorrect way around. They both have the same hundred thousands, ten thousands and thousands, but the 4 hundreds in 177 450 make it larger than 177 054.

12. George orders these numbers from largest to smallest:

$$564\ 039 \quad 560\ 439 \quad 506\ 439 \\ 564\ 309$$

George has misplaced the number 564 309. In this case, the numbers all have the five digits 5, 6, 4, 3, 9 in the same order with the 0 in different place values. In fact, the smaller place value in which the 0 is placed, the larger the number. The number 564 039 should be in second place with 564 309 being placed first as this is the largest number.