

## Counting

Use negative numbers in context, and calculate intervals across zero.

What number is three less than one?

-2

"Count forwards from -3."

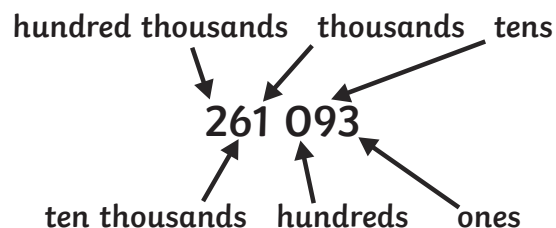
-3, -2, -1, 0, 1, 2, 3...

# Number and Place Value Mat

## Working Towards Year 6

### Place Value

Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.



### Compare and Order

Order and compare numbers to at least 1 000 000 and determine the value of each digit.

$$151\ 515 > 151\ 155$$

Order the following:

722 727, 27 277, 727 272, 722 772

27 277	722 727	722 772	727 272
smallest			greatest

### Read and Write

Read and write numbers to at least 100 000 and determine the value of each digit.

261 093

### Rounding

Round any whole number up to 100 000 to a required degree of accuracy.

Explain why 67 286 could be rounded to 68 000.

**Rounding 67 286 to the nearest ten thousand would mean using the number of thousands (7) and this is greater than or equal to 5, so it is rounded up to the next ten thousand (70 000) so it is rounded to 70 000.**

Round 50 to the nearest 20.

### Solve Problems

Solve number and practical problems that involve all of the other objectives.

Which 2 numbers can be multiplied to equal thousand?

5      50      20      200

$$5 \times 200 \text{ or } 50 \times 20$$

A pond is frozen so has ice on top but water underneath. The temperature at the bottom of the pond is  $4^{\circ}\text{C}$ . The temperature of the air above the ice is  $-2^{\circ}\text{C}$ ? What is the difference in temperature?

$6^{\circ}\text{C}$

## Counting

Use negative numbers in context, and calculate intervals across zero.

What number is twelve less than seven?

-5

Explain why  $-12 + 7$  is  $-5$  and not  $-19$ .

Because starting at  $-12$  and adding  $7$  will mean counting towards  $0$ , so  $-11$ ,  $-10$ ,  $-9$  etc. If the answer were  $-19$  then the counting would go  $-13$ ,  $-14$ , but this is subtracting not adding.

## Rounding

Round any whole number to a required degree of accuracy.

Explain why  $567\,286$  could be rounded to  $570\,000$ .

**Rounding  $567\,286$  to the nearest ten thousand would mean using the number of thousands ( $7$ ) and this is greater than or equal to  $5$ , so it is rounded up to the next ten thousand ( $70\,000$ ) so it is rounded to  $570\,000$ .**

Round  $425$  to the nearest  $50$ .

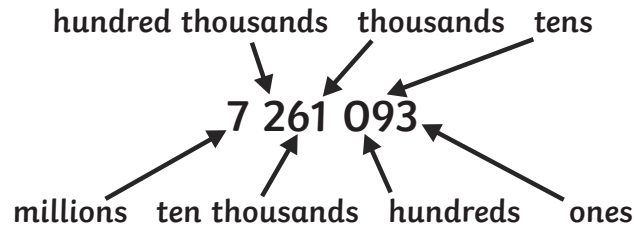
**450**

# Number and Place Value Mat

## Expected Year 6

### Place Value

Read, write, order and compare numbers to at least  $10\,000\,000$  and determine the value of each digit.



### Solve Problems

Solve number and practical problems that involve all of the other objectives.

Which 2 numbers can be multiplied to equal one hundred thousand?

50    500    2000    20 000

**50 and 2000**

The temperature at the bottom of a mountain is  $9^{\circ}\text{C}$ , but at the top it is  $-13^{\circ}\text{C}$ . What is the difference between the temperature at the top and bottom of the mountain?

**$22^{\circ}\text{C}$**

## Compare and Order

Order and compare numbers to at least  $10\,000\,000$  and determine the value of each digit.

$5\,151\,515 > 5\,151\,155$

Order the following:

$2\,722\,727$ ,  $277\,277$ ,  $2\,727\,272$ ,  $2\,722\,772$

277 277	2 722 727	2 722 772	2 727 272
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smallest

greatest

## Read and Write

Read and write numbers to at least  $10\,000\,000$  and determine the value of each digit.

9 261 093

## Counting

Use negative numbers in context, and calculate intervals across zero.

What number is the difference between 12 and -17?

Explain why  $-12 - 7$  is  $-19$  and not  $-5$ .

A man has £12 in cash and owes a friend £20. How much money has the man?

## Read and Write

Read and write numbers to at least 10 000 000 and determine the value of each digit.

Read half of this number aloud: 4 208 092.

Write fifty five thousand more than this number in numerals.

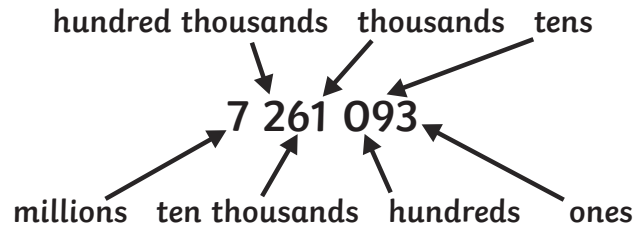
Six million, two hundred and three thousand, two hundred and seventeen

# Number and Place Value Mat

## Greater Depth Year 6

### Place Value

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



### Solve Problems

Solve number and practical problems that involve all of the other objectives.

Which 2 numbers can be multiplied to equal two million?

500    5000    40 000    400 000

The temperature at the bottom of a mountain is  $9^{\circ}\text{C}$ , but at the top it is  $-13^{\circ}\text{C}$ . Half way up the mountain the temperature is halfway between the temperatures at the top and bottom. What is the temperature half way up the mountain?

## Compare and Order

Order and compare numbers to at least 10 000 000 and determine the value of each digit.

When comparing 5 151 515 and 5 151 155, what is the place value of the digit which will tell which is greater?

Explain the reasons you would use to order the following numbers:

2 722 727, 277 277, 2 727 272, 2 722 772

## Rounding

Round any whole number to a required degree of accuracy.

Explain why 2 567 286 could be rounded to 2 600 000.

Round 3250 to the nearest 500.

The population of London is 8.674 million. To what number would you round the population of London when writing about London, giving your reasons.