## White <br> Year 5 - Autumn - Block I <br> Place Value

Dora has made five numbers, using the digits I, 2, 3, 4
She has changed each number into a letter.
Her numbers are
aabcd
acdbc
dcaba
cdadc
bdaab
Here are three clues to work out her numbers:

- The first number in her list is the greatest number.
- The digits in the fourth number total 12
- The third number in the list is the smallest number.

Tommy says he can order the following numbers by only looking at the first three digits.


## Is he correct?

Explain your answer.

Solve

## $\mathrm{CCCL}+\mathrm{CL}=$

How many calculations, using Roman Numerals, can you write to get the same total?

Here is part of a Roman Numerals hundred square.
Complete the missing values.

| XLIV | XLV |  | XLVII |
| :---: | :---: | :---: | :---: |
|  |  | LVI | LVII |
| LXIV |  | LXVI | LXVII |

What patterns do you notice?

My number rounded to the nearest 10 is I,I50
Rounded to the nearest 100 it is 1,200
Rounded to the nearest 1,000 it is 1,000

What could Jack's number be?
Can you find all of the possibilities?

## 2,567 to the nearest 100 is 2,500



Whitney
Do you agree with Whitney?
Explain why.

## Teddy



Explain the mistake Teddy has made.

Here is a number line.


What is the value of $A$ ?
$B$ is 40 less than $A$.
What is the value of $B$ ?
$C$ is 500 less than $B$.
Add $C$ to the number line.

Here are three ways of partitioning 27,650

27 thousands and 650 ones
27 thousands, 5 hundreds and 150 ones
27 thousands and 65 tens

Write three more ways.

Rosie counts forwards and backwards in 10s from 317

Circle the numbers Rosie will count.


Explain why Rosie will not say the other numbers.

Place the digits cards 0 to 9 face down and select five of them.

Make the greatest number possible and the smallest number possible.

How do you know which is the greatest or smallest?


Using the digit cards 0 to 9, create three different 5digit numbers that fit the following clues:

- The digit in the hundreds column and the ones column have a difference of 2
- The digit in the hundreds column and the ten thousands column has a difference of 2
- The sum of all the digits totals 19



## Round 59,996 to the nearest I,000 Round 59,996 to the nearest 10,000

What do you notice about the answers?

Can you think of three more numbers where the same thing could happen?

## Two 5-digit numbers have a difference of five.

When they are both rounded to the nearest thousand, the difference is $I, 000$

What could the numbers be?

Describe the value of the digit 7 in each of the following numbers.

How do you know?

## 407,338 <br> 700,491

25,571

The bar models are showing a pattern.
40,000


Draw the next three.

Create your own pattern of bar models for a partner to continue.

Amir writes the first five numbers of a sequence.
They are:
3,666, 4,666, 5,666, 6,666, 7,666

The $10^{\text {th }}$ term will be
I5,322 because I will double the $5^{\text {th }}$ term.


Is he correct?
Explain why.

I am counting up in 10s from 184 I will include 224


I am counting up in 100s from 604
I will include I,040
Rosie

## I am counting up in 1,000 s from 13 I will include 130,000

Who has made a mistake?
Identify anyone who has made a mistake and explain how you know.

The missing number is an odd number.
When rounded to the nearest 10,000 it is 440,000
The sum of the digits is 23


Greatest


What could the number be?

Can you find three possibilities?

Here are four number cards.


43,385
Four children take one each and say a clue.
My number is 57,000 when rounded to the nearest 100

My number has exactly three hundreds in it

My number is 43,000 when rounded to the nearest thousand


My number is exactly 100 less then

$$
57,063
$$

Which card did each child have?

The difference between two 3-digit numbers is two.
When each number is rounded to the nearest $\mathrm{I}, 000$ the difference between them is $I, 000$

What could the two numbers be?

When the difference between $A$ and $B$ is rounded to the nearest 100 , the answer is 700

When the difference between $B$ and $C$ is rounded to the nearest 100 , the answer is 400
$A, B$ and $C$ are not multiples of 10
What could A, B and C be?

## True or False?

- The temperature outside is -5 degrees, the temperature inside is 25 degrees.

The difference is 20 degrees.

- Four less than negative six is negative two.
- I5 more than -2 is 13

Explain how you know each statement is true or false.

Put these statements in order so that the answers are from smallest to greatest.

- The difference between -24 and -76
- The even number that is less than - 18 but greater than - 22
- The number that is half way between 40 and -50
- The difference between -6 and 7

