



## Maths Knowledge Organiser for Year 5 & 6

### Term: Autumn 1

#### Curriculum Objectives

##### Year 5: Place Value

- Numbers to 10,000
- Roman Numerals to 1,000
- Round to nearest 10, 100 and 1,000
- Numbers to 100,000
- Compare and order numbers to 100,000
- Round numbers within 100,000
- Numbers to a million
- Counting in 10s, 100s, 1,000s, 10,000s, and 100,000s
- Compare and order numbers to one million
- Round numbers to one million
- Negative numbers

##### Year 5: Addition and Subtraction

- Add whole numbers with more than 4 digits (column method)
- Subtract whole numbers with more than 4 digits (column method)
- Round to estimate and approximate
- Inverse operations (addition and subtraction)
- Multi-step addition and subtraction problems

##### Year 5: Statistics

- Read and interpret line graphs
- Draw line graphs
- Use line graphs to solve problems
- Read and interpret tables
- Two-way tables
- Timetables

##### Year 6: Place Value

- Numbers to ten million
- Compare and order any number
- Round any number
- Negative numbers

##### Year 6: Four Operations

- Add and subtract integers
- Multiply up to a 4-digit number by 2-digit number
- Short division
- Division using factors
- Long division (1)
- Long division (2)
- Long division (3)
- Long division (4)
- Common factors
- Common multiples
- Primes to 100
- Squares and cubes
- Order of operations
- Mental calculations and estimation
- Reason from known facts

#### Key Vocabulary

Timetable  
Line-graph  
Interpret  
Integer  
Digit

Compare  
Order  
Round  
Negative  
Factors

Inverse Roman numeral Compare Order Round Estimate Approximate Negative	Common Long Division Prime Square Cube Order (of operations) Estimation Reason
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**Examples**

<p>Place Value:</p> <p>Dora has made five numbers, using the digits 1, 2, 3 and 4</p> <p>She has changed each number into a letter.</p> <p>Her numbers are</p> <p>aabcd          acdbc          dcaba          cdadc          bdaab</p> <p>Here are three clues to work out her numbers:</p> <ul style="list-style-type: none"> <li>The first number in her list is the greatest number.</li> <li>The digits in the fourth number total 12</li> <li>The third number in the list is the smallest number.</li> </ul> <p>Addition and Subtraction:</p> <p>On Monday, Whitney was paid £114</p> <p>On Tuesday, she was paid £27 more than on Monday.</p> <p>On Wednesday, she was paid £27 less than on Monday.</p> <p>How much was Whitney paid in total?</p> <p>How many calculations did you do?</p> <p>Is there a more efficient method?</p> <p>Statistics:</p>	<p>Place Value:</p> <p>Miss Grogan gives out four number cards.</p> <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px 15px;">15,987</div> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px 15px;">15,813</div> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px 15px;">15,101</div> <div style="border: 1px solid blue; border-radius: 10px; padding: 5px 15px;">16,101</div> </div> <p>Four children each have a card and give a clue to what their number is.</p> <p>Tommy says, "My number rounds to 16,000 to the nearest 1,000"</p> <p>Alex says, "My number has one hundred."</p> <p>Jack says, " My number is 15,990 when rounded to the nearest 10"</p> <p>Dora says, "My number is 15,000 when rounded to the nearest 1,000"</p> <p>Can you work out which child has which card?</p> <p>Four Operations:</p> <p>Write different number sentences using the digits 3, 4, 5 and 8 before the equals sign that use:</p> <ul style="list-style-type: none"> <li>One operation</li> <li>Two operations with no brackets</li> <li>Two operations with brackets</li> </ul>
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120 people were asked where they went on holiday during the summer months of last year.



Use this information to create a two-way table.

In June, 6 people went to France and 18 went to Spain.

In July, 10 people went to France and 19 went to Italy.

In August, 15 people went to Spain.

35 people went to France altogether.

39 people went to Italy altogether.

35 people went away in June.

43 people went on holiday in August.

**For more information, please see the calculation policy on the website.**