## LEARNING JOURNEY MATHS

## Algebraic Expressions

## Year 7 Autumn Half Term 2

An important mathematical tool that aids in the everyday running of complex systems is generalisation; that is, using variables (algebra) to show relationships and procedures. Last half term we examined the structures that allowed us to manipulate calculations, and this half term we will look at the meaning of those calculations so that we can form generalisations.

Generalising with algebra will allow us to look closer at general trends and patterns, and will give us the opportunity to predict solutions to problems. It will also allow us to identify more efficient processes and ways to strategically problem solve - this a key characteristic of successful mathematicians.


TUDOR HABITS AND VALUES: You will build resilience and grit this half term; you will be using the concepts you examined in Autumn one and investigating how they apply in algebraic contexts. This will be unfamiliar and will require persistence.

VOCABULARY: Commutative, equal priority, expression, generalise, distributive, zero pairs, simplification, variable, substitute, constant, coefficient, expand.

|  |  |  | Learning Episode RAG | End of Term RAG |
| :---: | :---: | :---: | :---: | :---: |
| Order of Operations | 1 | Which Operations Have Equal Priority? |  |  |
|  | 2 | Equal Priority of Multiplication and Division |  |  |
|  | 3 | Higher Priority of Multiplication and Division |  |  |
|  | 4 | Raising Priority with Brackets |  |  |
|  | 込 | Homework 1 |  |  |
|  | 5 | Finding Simpler Ways to Calculate |  |  |
| Expressions | 6 | Creating the Need for Generalisation |  |  |
|  | 7 | Rules of Algebraic Notation |  |  |
|  |  | Learning Check 1 |  |  |
|  | 8 | Reading and Writing Expressions |  |  |
|  | :J | Homework 2 |  |  |
|  | 9 | Calculating Like Terms Using Distributivity |  |  |
|  | 10 | Manipulating Expressions: Multiplication and Division |  |  |
|  | 11 | Zero Pairs |  |  |
|  | $\begin{aligned} & 5 \\ & 0 \\ & 0 \end{aligned}$ | Homework 3 |  |  |
|  | 12 | Expanding Brackets |  |  |
|  | 13 | Building Expressions |  |  |
|  | 14 | Substitution: Substitute or Simplify? |  |  |
|  |  | Learning Check 2 |  |  |
|  | 15 | Substitution: Which Expression is Bigger? |  |  |
|  | 16 | Proof |  |  |

Student name: Class: $\qquad$

| Algebraic Expressions |  |
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| Order of Operations | Expressions |
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## Reflection and Next Steps

## Teacher Comment:

## Parent Comment:

Signed:

