

Topics in this cycle:	Taught: Spring 1	Year Group: 8
Key knowledge/concepts to be learnt ('Tell me about...')		Websites/blogs/YouTube links and further reading to deepen and consolidate learning
<p>Brackets, equations and inequalities:</p> <ul style="list-style-type: none"> • Solving equations (including brackets) • Forming and solving equations • Solving simple inequalities • Solve equations and inequalities with unknowns on both sides • Problem solving using algebra <p>Sequences/Indices:</p> <ul style="list-style-type: none"> • Generating sequences given worded rule/n-th term • Finding the n-th term of a sequence • Add/multiply expressions with indices • Use the addition and subtraction law for indices • Problem solving on sequences/law of indices 		<p> https://vimeo.com/491562998 https://vimeo.com/492153004 https://vimeo.com/492154163 </p> <p> https://vimeo.com/498290804 https://vimeo.com/501778472 https://vimeo.com/501778353 </p>

Key Vocabulary and Definitions To Be Learnt		What Will The Assessment Look Like?
Sequence	a list of things (usually numbers) that follow a rule	
Term	a number in a sequence	
Term to term rule	tells you how to get from one term in a sequence to another	
Graph	a visual representation of a sequence of numbers or data	
Linear	a sequence is linear when its values are represented by a straight line graph	
Non linear	a sequence of values that are represented by other than linear graphs	
Arithmetic sequence	involves adding or subtracting same number each time	
Fibonacci sequence	generates terms by adding two previous terms	
Operation	is a symbol like '+', '-', 'x' or '÷'	
Variable	is a number we do not know and use an alphabetic letter for	
Coefficient	is a number in front of a variable	
Term	is made of a coefficient and a variable	
Expression	consists of at least two terms connected with an operation	
Equation	a statement with an equal sign (=)	
Solve	to find a numerical solution	

Support your child at completing their homework and to boost SparxMaths XP level.

Brackets, equations and inequalities:

- **Expand a pair of binomials:**
Why do you get four terms when you multiply out two binomials?
Why can you simplify some quadratic expressions to three or fewer terms but not the others?
Do simplified quadratics always have three terms?
- **Solve equation with unknown on both sides:**
How can you check if a solution to an equation is correct?
When solving a four-term equation, why is it better to deal with the letters before the numbers?
Do we always start solving equations by subtracting something from both sides? Why or why not?
- **Solve complex equations and inequalities:**
Can you think of an equation with more than one solution?
Can an inequality have more than one solution?
Does the order of the steps matter? Why?
What do you do to decide your first step?

Sequences/Indices:

- **Finding an algebraic rule for a sequence:**
What does 'n' represent?
How can you tell the sequence is linear?
What is the constant difference in a sequence?
How does this refer to a coefficient in front of 'n'?



		<p>More: Explore Fibonacci Sequence in real life: https://youtu.be/ihxJN6ZC9HE?si=4NPH6Rmx6WkBJycr</p>
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