Year 9 Unit Overview-Number skills:

Test window: 7th November 2019 - 18th November 2019

Target grade for tests:

You will learn about:

- Numbers and the number system (HCF, LCM, prime numbers)
- Accuracy
- Using standard form to write large and very small numbers
- The importance of performing operations in the correct order

You will be able to:

- use the prime numbers, highest common factor, lowest common multiple, prime factorisation, including using product notation
- round numbers and measures to an appropriate degree of accuracy (e.g. to a specified number of decimal places or significant figures)
- interpret standard form $A \times 10^n$, where $1 \le A < 10$ and n is an integer
- apply the four operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers – all both positive and negative
- use the priority of operations, including brackets, powers, roots and reciprocals

Lesson Overview	Key Words
NUMBERS AND THE NUMBER SYSTEM - Recall prime numbers up to 100 - Understand the meaning of prime factor - Write a number as a product of its prime factors - Use a Venn diagram to sort information - Use prime factorisations to find the highest common factor of two numbers - Use prime factorisations to find the lowest common multiple of two numbers - Know how to identify any significant figure in any number - Approximate by rounding to any significant figure in any number - Write a large (small) number in standard form - Interpret a large (small) number written in standard form **CALCULATNG** - Add or subtract from a negative number - Add (or subtract) a negative number to (from) a positive number - Add (or subtract) a negative number to (from) a negative number - Multiply with negative numbers - Divide with negative numbers - Know how to square (or cube) a negative number - Substitute negative numbers into expressions - Enter negative numbers into a calculator - Use a scientific calculator to calculate with fractions, both positive and negative - Interpret a calculator display when working with negative numbers - Understand how to use the order of operations including powers - Understand how to use the order of operations including roots	**Refer to** **http://studymaths.co.uk/glossary.php for definitions of the key words** Prime Prime factor Prime factorisation Product Venn diagram Highest common factor Lowest common multiple Standard form Significant figure Negative number Directed number Improper fraction Top-heavy fraction Mixed number Operation Inverse Long multiplication Short division Power Indices Roots **Notation** Index notation: e.g. 5^3 is read as '5 to the power of 3' and means '3 lots of 5 multiplied together' Standard form (see key concepts) is sometimes called 'standard index form', or more properly, 'scientific notation'

Suggested reading or support/challenge available	Cross curricular

Suggested reading or support/challenge available

Support is available from a Maths teacher in 'MORALE' in M1 daily from 1:30pm -1:45pm

www.mymaths.co.uk
login: penryn
password:

www.hegartymaths.com
Go to student login at the top… find your school, enter your details and then set up your password…

https://vle.mathswatch.com/vle/
login: school username followed by **@penryn-college**
password: **Penryn2016**

www.justmaths.co.uk/online
login: PenrynStudent
password: Penryn

Use your revision guide
Use the code in the front of your guide to access your free online revision

Cross curricular
SMSC:
1.1 Exploring, understanding and respecting cultural diversity e.g. exploration of different methods of calculation.
3.1 Developing personal qualities and using social skills (regular paired/ group work communication).
3.2 Participating, cooperating and resolving conflicts (paired/group activities).
4.2 Experiencing fascination, awe and wonder of mathematics.
4.4 Using imagination and creativity in learning.

Literacy: Verbal communication of understanding using key words in the correct context. Development of written communication of methods and strategies to problem solve.

NAC:
Science –Estimation. Round whole numbers and decimals. Order, add and subtract negative numbers. Use significant figures. Use standard form (in Y10). Use formulae involving negative numbers (in Y10). Use a calculator efficiently.
Business – Use formulae involving negative numbers (in Y10).
MFL – Mental and written calculations with whole numbers and decimals. Use a calculator efficiently.
RE - Estimation.
PE - Round whole numbers and decimals.
Geography -. Estimation. Round whole numbers and decimals. Use a calculator efficiently.
Creative Arts - Estimation. Round whole numbers and decimals (in Y10). Use a calculator efficiently (in Y10).

Research	
Note-making	
Group work & discussion	
Memorisation	
Precision & accuracy	
Independence	
Reflection	